

(18)

No. 94-2003

Supreme Court, U.S.
FILED
DEC 8 1995

CLERK

In The

Supreme Court of the United States

October Term, 1995

LOTUS DEVELOPMENT CORPORATION,

Petitioner.

v.

BORLAND INTERNATIONAL, INC.,

Respondent.

On Writ Of Certiorari To The
United States Court Of Appeals
For The First Circuit

BRIEF FOR RESPONDENT

GARY L. REBACK
(Counsel of Record)
MICHAEL BARCLAY
SUSAN A. CREIGHTON
COLLEEN BAL
LISA A. DAVIS
WILSON, SONSINI, GOODRICH
& ROSATT
PROFESSIONAL CORPORATION
650 Page Mill Road
Palo Alto, California 94304
Telephone: (415) 493-9300

ROBERT H. KOHN
BORLAND INTERNATIONAL, INC.
100 Borland Way
Scotts Valley, California
95066
Telephone: (408) 431-1801

PETER E. GELHAAR
KATHERINE L. PARKS
DONNELLY, CONROY &
GELHAAR
One Post Office Square
33rd Floor
Boston, Massachusetts 02109
Telephone: (617) 542-7400

Attorneys for Respondent

December 1995

COCKLE LAW BRIEF PRINTING CO. (800) 223-6964
OR CALL COLLECT (402) 343-2831

BEST AVAILABLE COPY

66 pp

RULE 29.6 STATEMENT

Respondent Borland International, Inc. has no parent corporation or subsidiaries that are not wholly owned, except for certain foreign subsidiaries in which a minimal amount of shares (fewer than 1%), which are not publicly traded, are held by foreign nationals in accordance with local law.

TABLE OF CONTENTS

	Page
RULE 29.6 STATEMENT	i
TABLE OF CONTENTS	ii
TABLE OF AUTHORITIES	iv
CONSTITUTIONAL PROVISIONS INVOLVED.....	1
STATEMENT OF THE CASE	1
A. Development of 1-2-3	2
1. User Interface	2
2. Words and Order	4
(a) Words.....	4
(b) Structure	4
(c) Code.....	5
(d) Description	5
(e) Written materials.....	7
3. Success of 1-2-3.....	8
B. The Development of the Borland Products....	10
C. Market Effects	13
D. Procedural History of the Case	17
INTRODUCTION AND SUMMARY OF ARGUMENT	19
ARGUMENT.....	22
I. COPYRIGHT PROTECTION MAY NOT BE USED TO AVOID THE STATUTORY REQUIREMENTS OF THE PATENT LAWS	22

TABLE OF CONTENTS - Continued

	Page
A. The Patent Laws Carefully Limit the Extent to Which the "Useful Arts" May be Subject to Private Monopoly	24
B. <i>Baker v. Selden</i> and its Progeny Have Rejected the Use of Copyright to Circumvent the Requirements of the Patent Statute.....	26
1. The Court's <i>Baker v. Selden</i> Decision	27
2. Cases following <i>Baker v. Selden</i>	29
C. Section 102(b) Incorporates the Limitation on Copy- right Protection For Utilitarian Functions	31
1. The Terms in Section 102(b) are Drawn From the Patent Law.....	31
2. A "Computer Program" is not a "Process" or "Method of Operation.".....	35
II. LOTUS' MENU COMMAND HIERARCHY IS UNPROTECTED UNDER SECTION 102(b) OF THE COPYRIGHT ACT	38
A. The Lotus Menu Command Hierarchy is Not a "Computer Program" Under Section 101	39
B. The Menu Command Hierarchy is an Unprotected Element of the Lotus Users' Man- ual and the Lotus Screen Display	41
1. The Lotus Reference Manual	42
2. The Lotus 1-2-3 Screen Display	43
C. Even if Part of the Computer Program for Pur- poses of Section 102(a), the Menu Command Hierarchy is an Unprotected Method of Opera- tion under Section 102(b)	46

TABLE OF CONTENTS - Continued

APPENDIX	Page
Lotus 1-2-3 Screen Display.....	A-1
Borland's Quattro Pro Screen Display	A-2
Lotus Command Tree	A-3
Lotus 1-2-3 Screen Display (showing long prompt)....	A-4
Microsoft's Excel Screen Display	A-5

TABLE OF AUTHORITIES

	Page(s)
CASES	
<i>Affiliated Enters. v. Gruber</i> , 86 F.2d 958 (1st Cir. 1936).....	29n, 33
<i>Amberg File & Index Co. v. Shea Smith & Co.</i> , 82 F. 314 (7th Cir. 1897).....	33
<i>Application of Drummond</i> , 302 F.2d 761 (C.C.P.A. 1962).....	34n
<i>Application of Hortman</i> , 264 F.2d 911 (Cust. & Pat. App. 1959)	33
<i>Application of Horvath</i> , 211 F.2d 604 (C.C.P.A. 1954) ...	32n
<i>Application of Moreton</i> , 288 F.2d 708 (C.C.P.A. 1961) ...	32n
<i>Application of Orsini</i> , 158 F.2d 286 (C.C.P.A. 1946) ...	34n
<i>Application of Schutt</i> , 210 F.2d 293 (C.C.P.A. 1954) ...	32n
<i>Baker v. Selden</i> , 101 U.S. 99, 25 L.Ed. 841 (1879).... <i>passim</i>	
<i>Beedle v. Bennett</i> , 122 U.S. 71 (1887).....	26n
<i>Bonito Boats, Inc. v. Thunder Craft Boats, Inc.</i> , 489 U.S. 141 (1989).....	20, 25, 28, 38n
<i>Brief English Sys., Inc. v. Owen</i> , 48 F.2d 555 (2d Cir.), cert. denied, 283 U.S. 858 (1931).....	29n, 33
<i>Campbell v. Acuff-Rose Music, Inc.</i> , 114 S.Ct. 1164 (1994).....	18n
<i>Capitol Records v. Mercury Records Corp.</i> , 221 F.2d 657 (2d Cir. 1955)	23n
<i>Coakwell v. United States</i> , 372 F.2d 508 (Ct. Cl. 1967).....	26n
<i>Crume v. Pacific Mut. Life Ins. Co.</i> , 140 F.2d 182 (7th Cir.), cert. denied, 322 U.S. 755 (1944).....	29n

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>Davis v. Michigan Dept. of Treasury</i> , 489 U.S. 803 (1989).....	33
<i>Deepsouth Packing Co. v. Laitram Corp.</i> , 406 U.S. 518 (1972).....	23
<i>Diamond v. Chakrabarty</i> , 447 U.S. 303 (1980)....	23n, 32
<i>Diamond v. Diehr</i> , 450 U.S. 175 (1981).....	34
<i>Expanded Metal Co. v. Bradford</i> , 214 U.S. 366, 53 L.Ed. 1034 (1909).....	32n
<i>Feist Publications, Inc. v. Rural Telephone Svc. Co.</i> , 499 U.S. 340 (1991).....	20, 37n
<i>Fogerty v. Fantasy, Inc.</i> , 114 S.Ct. 1023 (1994)	2, 20, 22, 23, 38, 45
<i>Gottschalk v. Benson</i> , 409 U.S. 63 (1972)	34n
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966)...	23n, 24, 38n
<i>Graver Tank & Mfg. Co., Inc. v. Linde Air Prods. Co.</i> , 336 U.S. 271 (1949).....	34n
<i>Griggs v. Perrin</i> , 49 F. 15 (C.C.N.D.N.Y. 1892).....	33
<i>Gustafson v. Alloyd Co., Inc.</i> , 115 S. Ct. 1061 (1995)....	31
<i>In re Hayes Microcomputer Prods. Patent Litig.</i> , 982 F.2d 1527 (Fed. Cir. 1992).....	26
<i>Kouf v. Walt Disney Pictures & Television</i> , 16 F.3d 1042 (9th Cir. 1994).....	35n
<i>LeRoy v. Tatham</i> , 55 U.S. 156 (1852)	33
<i>Lotus Dev. Corp. v. Borland Int'l, Inc.</i> , 788 F. Supp. 78 (D. Mass. 1992).....	2n, 17, 35
<i>Lotus Dev. Corp. v. Borland Int'l, Inc.</i> , 799 F. Supp. 203 (D. Mass. 1992).....	<i>passim</i>

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>Lotus Dev. Corp. v. Borland Int'l, Inc.</i> , 831 F. Supp. 202 (D. Mass. 1993).....	2n, 4n, 8n, 9, 17
<i>Lotus Dev. Corp. v. Borland Int'l, Inc.</i> , 831 F. Supp. 223 (D. Mass. 1993).....	<i>passim</i>
<i>Lotus Dev. Corp. v. Borland Int'l, Inc.</i> , 49 F.3d 807 (1st Cir. 1995)	<i>passim</i>
<i>Lotus Dev. Corp. v. Paperback Software Int'l</i> , 740 F. Supp. 37 (D. Mass. 1990).....	2, 3, 8, 8n, 10, 19n, 43
<i>Mazer v. Stein</i> , 347 U.S. 201 (1954)	30
<i>Morrissey v. Proctor & Gamble Co.</i> , 379 F.2d 675 (1st Cir. 1967)	4n
<i>Nichols v. Universal Pictures Corp.</i> , 45 F.2d 119 (2d Cir. 1930), cert. denied, 282 U.S. 902 (1931).....	35n
<i>Raffold Process Corp. v. Castanea Paper Co.</i> , 98 F.2d 355 (3d Cir.), cert. denied, 305 U.S. 635 (1938)....	34
<i>Russell Motor Car Co. v. United States</i> , 261 U.S. 514 (1923).....	32
<i>Saranac Automatic Mach. Corp. v. Wirebounds Patents Co.</i> , 282 U.S. 704 (1931).....	34n
<i>Sony Corp. of America v. Universal City Studios, Inc.</i> , 464 U.S. 417 (1984).....	22, 23n, 38, 49
<i>Taylor Instrument Cos. v. Fawley-Brost Co.</i> , 139 F.2d 98 (7th Cir. 1943), cert. denied, 321 U.S. 785 (1944).....	29, 30
<i>Twentieth Century Music Corp. v. Aiken</i> , 422 U.S. 151 (1975).....	38, 38n, 49

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>U.S. Indus. Chems., Inc. v. Carbide & Carbon Chems. Corp.</i> , 315 U.S. 668 (1942)	34n
<i>Voightmann v. Perkinson</i> , 138 F. 56 (7th Cir. 1905)	33
 STATUTES	
17 U.S.C. § 101 (1995)	39
17 U.S.C. § 102(a) (1995).....	21, 22, 23n, 46, 50
17 U.S.C. § 102(b) (1995)	<i>passim</i>
17 U.S.C. § 106(1) (1995)	26
35 U.S.C. § 100(b) (1995)	32
35 U.S.C. § 101 (1995).....	32
35 U.S.C. § 102 (1995).....	19
35 U.S.C. § 103 (1995).....	19
35 U.S.C. § 112 (1995).....	19, 35
35 U.S.C. § 131 (1995).....	19
35 U.S.C. § 154 (1995).....	26
Act of Feb. 21, 1793, § 1, 1 Stat. 319	20n, 23n
 LEGISLATIVE MATERIALS	
H.R. REP. No. 1923, 82d Cong., 2d Sess. (1952)....	23n, 24n
H.R. REP. No. 1476, 94th Cong., 2d Sess. (1976)..	23n, 35
S. REP. No. 338, 24th Cong., 1st Sess. (1836).....	45n
S. REP. No. 983, 93d Cong., 2d Sess. (1974).....	33

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>Copyright Law Revision: Hearings Before the Sub-comm. on Patents, Trademarks, and Copyrights of the Senate Comm. on The Judiciary</i> , 90th Cong., 1st Sess. (1967)	36
<i>Copyright Law Revision: Hearings Before the Sub-comm. on Courts, Civil Liberties, and the Admin. of Justice of the House Comm. on the Judiciary</i> , 94th Cong., 1st Sess. (1975)	34n
 CONSTITUTION	
U.S. CONST. art. I, § 8, cl. 8	1, 19, 23n, 33
 MISCELLANEOUS	
<i>Final Report of the National Commission on New Technological Uses of Copyrighted Works</i> (1979).....	37, 38, 39, 39n, 41n, 47
Benjamin Kaplan, <i>AN UNHURRIED VIEW OF COPYRIGHT</i> 64 (1967).....	28, 29
IBM DICTIONARY OF COMPUTING (10th ed. 1993)	40n
I Paul Goldstein, <i>COPYRIGHT</i> § 2.15.3.1 (2d ed. 1996) ...	41n
I KAMINSTEIN LEGISLATIVE HISTORY PROJECT (1981)	36
Kenneth A. Liebman, et al., <i>Back to Basics: A Critique of the Emerging Judicial Analysis of the Outer Limits of Computer Program "Expression,"</i> 2 COMPUTER LAW., (Dec. 1985).....	46n
MICROSOFT PRESS COMPUTER DICTIONARY (2d ed. 1994) ...	40n

TABLE OF AUTHORITIES - Continued

	Page(s)
U.S. Congress, Office of Technology Assessment, <i>Finding a Balance: Computer Software, Intellectual Property, and the Challenge of Technological Change</i> , OTA-TCT-527 (Washington, D.C.: Government Printing Office, May 1992).....	48n
WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY (9th ed. 1988).....	33, 34, 55n
William M. Landes and Richard A. Posner, <i>An Economic Analysis of Copyright Law</i> , 18 J. OF LEGAL STUD. (1989)	37n

Borland International, Inc. ("Borland") respectfully seeks affirmance of the judgment of the United States Court of Appeals for the First Circuit in this case.

CONSTITUTIONAL PROVISIONS INVOLVED

Lotus Development Corporation ("Lotus") does not cite in full the applicable Constitutional provision involved. Brief for the Petitioner ("Lotus Br.") at 1, 20. Article 1, Section 8, Clause 8 of the U.S. Constitution provides (portions omitted by Lotus italicized):

"Congress shall have the power . . . To promote the progress of science and useful arts, by securing for limited times to authors *and inventors* the exclusive right to their *respective writings and discoveries*."

STATEMENT OF THE CASE

There is good reason why this computer software copyright case has generated such widespread attention among the computer industry, the academic community and the legal profession. In the usual software copyright case, the defendant is alleged to have copied either the text ("code") or structure of plaintiff's computer program, or the way the program looks on the computer screen when it is executing. No such copying occurred here. Lotus does not even allege any copying of its code, and the district court held that the programs at issue look different, a ruling Lotus did not attempt to appeal.

The sole basis for Lotus' claim is that Borland copied menus of command words that are displayed on the computer screen to permit the user to invoke the functionality of the program. Lotus does not allege that Borland copied the textual explanations of the command words – only the words themselves and their order. The words (such as "COPY" and "PRINT") in Lotus' menus are like the labels on switches and knobs. In number, arrangement and function, they are analogous to the switches and attendant labels that are arranged and grouped in the cockpit of a commercial jet aircraft. Indeed, the district court characterized Lotus' menu hierarchy as "the selection and arrangement of executable operations."

Lotus' menu command hierarchy may well constitute patentable subject matter. But Lotus bases its claim on the law of copyright, not patent. Lotus' argument ignores the important policies and procedures of the patent law, reads important limiting language out of the copyright statute, and refuses even to acknowledge that its proposed extension of the scope of copyright must "ultimately serve the public good," as this Court has so often counseled. *See, e.g., Fogerty v. Fantasy, Inc.*, 114 S.Ct. 1023, 1029 (1994). The First Circuit Court of Appeals unanimously rejected Lotus' approach. Borland respectfully requests that this Court do so as well.

A. Development of 1-2-3

1. User Interface

The record in this case indicates that the code and some of the functionality of the 1-2-3 program were original to Lotus, but virtually every element of the program's user interface, including the command words and segments of the hierarchy, was present in products developed by other companies prior to 1-2-3. VisiCalc, the first commercial electronic spreadsheet, was described by the district court as "a revolutionary advance in the field of programming." *Lotus Dev. Corp. v. Paperback Software Int'l*, 740 F. Supp. 37, 65 (D. Mass. 1990) ("Paperback"), Pet.App. 230a.¹ The extent to which Lotus appropriated aspects of VisiCalc was hotly contested in the *Paperback* case. *See id.* at 83, Pet.App. 265a. The district court conceded that Lotus used a number of elements from VisiCalc, including the spreadsheet metaphor and the designations of various keys to perform specific functions, *see id.* at 66, Pet.App. 231a-232a, but the court found each of these features uncopiable. The court concluded that the 1-2-3 menu structure

"taken as a whole" was "original and non-obvious" and, hence, the 1-2-3 user interface was copyrightable. *Id.* at 68, Pet.App. 234a-235a.

The 1-2-3 user interface presents command choices through a "two-line moving cursor." The top line is the set of available command options, and the second line is the "long prompt," or explanatory message, for the command on which the cursor is set in the top line.² *Id.* at 64, Pet.App. 227a. Commands are selected either by (a novice) using the cursor keys to highlight the desired command, then pressing "enter," or by (a more advanced user) typing the first letter of the command on the keyboard, in the same manner as a touch typing system. *See, e.g., Pet.App. 288a (Kapor Aff.); Paperback at 64, Pet.App. 228a.* Commands may also be selected when they are spoken into a computer equipped with voice recognition software. *See Lotus v. Borland* at 816, Pet.App. 17a.

Comparing 1-2-3's full-word menu presentation with the list of letters displayed by VisiCalc, Lotus asserts that its menu command hierarchy represented "a major advance in interface design." Lotus Br. at 11. The presentation of full words, however, like most of the rest of 1-2-3's user interface, was not original to Lotus – full word display was taken from a different product, VisiTrend/Plot, which also predated 1-2-3. VisiTrend/Plot was a graphics and statistical analysis program that 1-2-3's principal developer, Mitchell Kapor, worked on for a previous employer, Personal Software, Inc. Pet.App. 282a-283a (Kapor Aff.). Kapor's own affidavit, submitted by Lotus in this case, admits that the two line moving cursor and its "main elements" came from the earlier VisiPlot product. *Id.* at 286a-287a. Indeed, the record in this case demonstrates that virtually all of the user interface features associated by the district court in *Paperback* with 1-2-3 were taken initially from the VisiPlot product. *See JA 311 (Buechele Decl.).* These include features such as "full word command names," and "command long prompts following highlighting on status line."³

¹ Each of the four decisions of the District Court in *Lotus Dev. Corp. v. Borland Int'l, Inc.* relies upon *Paperback*. Those opinions are reported at 788 F. Supp. 78 (D. Mass. 1992) ("Borland I"), 799 F. Supp. 203 (D. Mass. 1992) ("Borland II"), 831 F. Supp. 202 (D. Mass. 1993) ("Borland III"), and 831 F. Supp. 223 (D. Mass. 1993) ("Borland IV"). The decision of the Court of Appeals appears at 49 F.3d 807 (1st Cir. 1995) ("Lotus v. Borland").

² A picture of a 1-2-3 screen with the menu commands and "long prompt" identified is found at A-4 in the Appendix to this brief and at JA 981.

³ Other such features include a "highlighted, moving cursor," "command selection based on highlighting, with command activation based on subsequent

2. Words and Order

(a) *Words.* It is equally undisputed that the vast majority of command words and functions of 1-2-3 were not original to that product. Many of the 1-2-3 menu commands and functions were present in VisiCalc. The early drafts of the menu command hierarchy of 1-2-3 were in substantial part identical to that of VisiCalc,⁴ and commands as well as functionality were incorporated into 1-2-3 from Context MBA (an applications program) and BASIC (a programming language).⁵

It is certainly no surprise that 1-2-3 would use the same command words as pre-existing products because, according to Jonathan Sachs, one of the 1-2-3 developers, "every command was chosen because it suggested to some measure what the command did." JA 750 (depo.). The Kapor affidavit is to the same effect: words were chosen to "intelligently convey to the user the purpose of each command and its underlying functionality." Pet.App. 291a.⁶

(b) *Structure.* Lotus does not base its claim of infringement on Borland's use of the same command words, since those words are common to spreadsheet products.⁷ Lotus' claim of infringement therefore devolves to the question of the copyrightability of the

<Enter> key," "command activation based on abbreviated command name," and "ordering of commands by anticipated frequency of use." JA 311 (Buechele Decl.).

⁴ Lotus doc. 046195 LP; compare Lotus doc. KP00861 with Paperback at 67, Pet.App. 234a. The similarity was of both words and order. The menu command hierarchy was reordered shortly before commercial release to make it more functional. Compare Lotus doc. 046559, 582-608 (command structure as of Sept. 7, 1982) with Lotus doc. 046685-91 (final structure). The cited Lotus documents are attached to the Konstantaras Decl. (Dkt. 230), Ex. A, H, I [Dkt. 241, 3:14-3:18; Dkt. 242, 4:22-5:24].

⁵ Lotus docs. KP02306; KP01103; KP01082; KP01085 (Dkt. 230), Ex. B, C [Dkt. 241, 3:14-3:18; Dkt. 242, 4:22-5:24].

⁶ In copyright terms, each menu command and its underlying function "merged." See, e.g., *Morrissey v. Proctor & Gamble Co.*, 379 F.2d 675, 678-79 (1st Cir. 1967).

⁷ For example, Quattro Pro's "native" interface, against which Lotus professes no claim, uses basically the same command set in a different order. Lotus makes no claim to the Quattro products' native interfaces. *Borland III* at 211, Pet.App. 82a.

order or structure of these common commands, but not the *words* themselves. Lotus Br. at 6.

According to Lotus' affidavits, the commands were organized "hierarchically," in the manner depicted in the "menu tree," so that "the selection of one command option from the first level menu could lead in turn to another array of command options on a second level menu (or 'submenu'), and so on."⁸ Pet.App. 287a (Kapor Aff.). This "menu tree" is merely a depiction setting out the organized hierarchical set of alternative steps that an individual may take to manipulate and perform calculations and other operations on the data contained in the cells of the spreadsheet grid. As the program executes, a few commands appear in the top portion of the screen in an order determined by the functional result the user is seeking. The hierarchical arrangement was chosen to enable "the novice user to browse through the menu levels, in order to view the valid sequences of available options (and their corresponding explanations) and to map out a plan for performing a particular task." Pet.App. 287a (Kapor Aff.).

(c) *Code.* Lotus' brief implies that 1-2-3's developers first prepared their product's code and then affixed labels to the various functions. See Lotus Br. at 9. In fact, however, the record submitted by Lotus in the trial court reveals a far more iterative process, during which changes in the hierarchy were implemented (or "expressed") in code. Kapor started borrowing user interface features from VisiPlot in December of 1980 and began to apply these ideas to his new product in mid-1981. Pet.App. 285a (Aff.). "Typically, Kapor suggested a feature; we [Kapor and Sachs] discussed it; and [Sachs] attempted to implement it in the program's source code." JA 538 (Sachs Aff.). In 1982, Kapor made the final decisions as to "what words would be used and where on the menu tree they would be located. [Sachs] then modified the source code to reflect [Kapor's] changes." *Id.* at JA 539.

(d) *Description.* Lotus describes the purpose of the menu command hierarchy in terms that differ markedly from the record in the district court. Lotus asserts that a "proper understanding of

⁸ A chart from the trial exhibit depicting a portion of this "tree" is reproduced in the Appendix to this brief at A-3. JA 918. The entire menu tree is depicted at Ex. C to Flesher Decl. (Dkt. 81) [Dkt. 164, JA 78-79].

the nature and purpose of the 1-2-3 menu command hierarchy is critical to an appropriate resolution of this case." Lotus Br. at 5. But Lotus omits any mention of the other elements of 1-2-3 that explain and describe the hierarchy, leading the reader to conclude that the hierarchy must, of necessity, fill the role of providing explanation, as well as invoking functionality. Without any citation to the record, Lotus argues, for example, that the menu words are "a form of structured dialog between 1-2-3's authors and users." *Id.* at 6. For purposes of this appeal, the words supposedly are "simply words of text" that "provide information" in "plain English" like "the pages of an instruction manual." *Id.*

In fact, the Lotus commands are no more "an instruction manual" than are the "■" or "►►" buttons on a videocassette recorder ("VCR") the same as the VCR instruction manual. Lotus' key witnesses, documents and experts in the district court all drew a firm line between the functional role of the menu commands in the hierarchy (the "options" for "performing a particular task") and the "explanation" of those commands provided elsewhere in the product. The affidavit of 1-2-3's principal developer, for example, described the elements of the 1-2-3 user interface in terms similar to those employed by this Court in *Baker v. Selden*. Thus, according to the Kapor affidavit, the object of the long prompts is to provide "information to the user" and "explanations," while the object of the menus is to perform "a particular task." Pet.App. 287a, 296a. Compare 101 U.S. 99, 105 (the object of copyrightable subject matter is "explanation," while the object of patentable subject matter is "use").

Lotus' expert Galler also distinguished between the menu choices themselves and "explanatory information" – in the form of long prompts and help screens – about the menu choices. JA 376-77, 381 (Galler Decl.). As the Galler declaration (submitted by Lotus) makes clear, the command words do not explain to the user how to use the system – they identify the functions that comprise the system and provide the means by which each function is invoked. Explanation and education are provided by the on-line help facility, product documentation, long prompts, and tutorials supplied with the system. *Id.* at 377; see also JA 393-94 (2nd Galler Decl.) (admitting command words do not provide sufficient

information to be a substitute for the documentation, tutorials or help screens).

(e) *Written materials.* The written materials that accompany the Lotus product reflect the same dichotomy between the functional words of the hierarchy and their accompanying description. According to Lotus' written materials, the menus are "options" that the user may "select."⁹ A long prompt, on the other hand, is a "brief description of what the command does."¹⁰ A more complete explanation can be found in the on-line "Help" text that the program displays on the screen: "The Help facility is like a reference manual that is always open to the right page."¹¹ And, finally, of course, the written documentation provided by Lotus "contains detailed information about all of the features of 1-2-3."¹²

The commands are the means by which a user invokes the functionality of the program. Each individual command and each sequence of commands is described and explained in the long prompts, the on-line help text, and the user's manual. See 1-2-3 Ref. at 44 (Dkt. 158). Tables illustrating the descriptions given for particular command sequences in each of these sources are set out in the record as part of Borland's motion for summary judgment in the District Court. See Borland's Mem. in Support of Renewed Motion for S.J. (Dkt. 168) at 55, 56.

Borland does not deny that the user's manual, on-line help text, and perhaps even the long prompts may contain copyrightable "expression." But Lotus has not accused Borland of copying such explanatory text. Lotus' claims are directed only to the menu command hierarchy which Lotus' own witnesses and documents readily distinguish from "explanation" and "description."

⁹ Lotus 1-2-3 User's Manual (1983), Borland's Mem. in Support of Cross-Motion for S.J. ("Borland S.J. Br."), Ex. 9 ("S.J. Ex.") (Dkt. No. 142) at L084455 [Dkt. 164, JA 78-79].

¹⁰ Lotus 1-2-3 Reference Manual, Release 2 at 28 (1st ed. 1985) ("1-2-3 Ref.") (Dkt. 158) [Dkt. 164, JA 78-79]. The First Circuit noted that "[t]he long prompts explain, as a sort of 'help text,' what the highlighted command will do if entered." *Lotus v. Borland* at 811 n.2, Pet.App. 7a.

¹¹ Lotus 1-2-3 Tutorial, Release 2 at 12 (1st ed. 1985) ("1-2-3 Tut.") (Dkt. 158) [Dkt. 164, JA 78-79].

¹² 1-2-3 Tut. at Preface (Dkt. 158) [Dkt. 164, JA 78-79].

Nor was the district court under any illusion that it was protecting something akin to "the pages of an instruction manual." Lotus Br. at 6. There was no misunderstanding by the district court as to "the nature and purpose" of the subject matter at issue. Given the record created by Lotus,¹³ the district court forthrightly and correctly described the menu command hierarchy in starkly functional terms – as the "selection and arrangement of executable operations," which the district court held to be copyrightable subject matter. *Borland IV* at 231, Pet.App. 41a. The district court was equally unambiguous in holding that copying functionality constitutes copyright infringement: "Borland's reason for copying the menu command structure was to obtain the benefits of its functionality." *Borland II* at 209, Pet.App. 115a. Having labored to obtain exactly what it sought from the district court – protection by copyright over the "selection and arrangement of executable operations" – Lotus should not now be heard to suggest that it is really the "explanation" as opposed to the "system" or "method of operation" that it is trying to protect.

3. Success of 1-2-3

1-2-3 was a market success, but that success had little to do with the menu command hierarchy. As the district court observed in *Paperback*, VisiCalc, the predecessor of 1-2-3, was programmed for use on the Apple II computer, which had limited functional capabilities. *Paperback* at 65, Pet.App. 230a-231a. When the IBM PC was introduced in August of 1981, the developers of 1-2-3 "exploited this opportunity" by designing 1-2-3 to take "advantage of the IBM PC's more expansive memory and more versatile

¹³ The district court record also reflects the fact that the 1-2-3 hierarchy was organized according to a number of functional principles: predicted frequency of use of commands, approximately seven functions on a menu level, unique first letters on each level, etc. See, e.g., *Paperback* at 67, Pet.App. 234a; Pet.App. 291a-292a (Kapor Aff.). For example, commands within a given menu level were arranged from left to right in declining order of frequency of usage, so as to minimize keystrokes. Pet.App. 291a (Kapor Aff.). The lower court found that these principles functioned merely as "guidelines" and did not fully constrain the choice of words or order at the time Lotus 1-2-3 was first developed. *Borland III* at 213, Pet.App. 85a.

screen display capabilities and keyboard." *Id.* at 66, Pet.App. 231a.¹⁴ The menu command hierarchy was simply not a qualitatively significant part of the product *at the time of its introduction*, either from Lotus' viewpoint or the viewpoint of users. As the district court observed, citing Borland's experts, "the words Lotus selected did not matter for 1-2-3's success." *Borland III* at 213, Pet.App. 87a.¹⁵

The exact words and order of the Lotus menu command hierarchy were not important to the product's initial success, but they *became* vitally important to the success of later 1-2-3 versions and spreadsheets offered by Lotus' competitors because of the "macro" capability included within the first 1-2-3 release. The citations for Lotus' assertion that "both sides experts agreed" that the menus possessed "great commercial significance," Lotus Br. at 11, all refer to the period of time *after* users invested heavily in the creation of "macros." See JA 343-344 (Emery Decl.); JA 507 (Olson Decl.).

Like the other 1-2-3 features, macro capability was not original to 1-2-3; it was taken from pre-existing products. Pet.App. 290a (Kapor Aff.); JA 529-30 (Raburn Decl.). From the initial release of 1-2-3, the documentation for the product instructed users to create "keyboard macros." JA 530 (Raburn Decl.) & JA 535-36 (Ex. B); JA 877 (Ex. 38) [Dkt. 164, JA 78-79]. "Macros" are application programs that users and third parties write, using the

¹⁴ The former Lotus executives responsible for the "launch" and initial marketing of 1-2-3 testified that the menu commands played no ascertainable role in its commercial success: "Any word would have sufficed for a command so long as the word conveyed to the user in a direct and simple way the function of the command." JA 528 (Raburn Decl.); see *Borland S.J. Br.* (Dkt. No. 141) at 134-35; JA 527 (Raburn Decl.); JA 404-06 (Goldschmitt Decl.). An internal Lotus memorandum prepared shortly before 1-2-3's introduction did not identify the command hierarchy as a feature that would cause 1-2-3 to be a success. JA 405-06 (Goldschmitt Decl.); S.J. Ex. 31 (Dkt. 142) at KP02216-KP02224 (Product Positioning Summary, Sept. 7, 1982) [Dkt. 164, JA 78-79].

¹⁵ Nor did Lotus' expert dispute the point. Rather, he deemed the question of whether other words could have been changed at the time of 1-2-3's development to be "irrelevant." JA 343 (Emery Decl.). The only finding the district court made with respect to the menu words was that the menus used were a "more than trivial" portion of the program. *Borland II* at 219, Pet.App. 135a.

words and order of the 1-2-3 menu command hierarchy as a "command language." Pet.App. 290a (Kapor Aff.). A simple macro is a stored set of instructions that can be invoked in a single keystroke, *see Paperback* at 64, Pet.App. 228a, but more complicated macros, consisting of thousands of lines of code, perform sophisticated applications, *see Borland IV* at 227, Pet.App. 32a; JA 508 (Olson Decl.) (example of more complex macro).

A macro represents a set of steps that must be performed in a designated way – that is, according to the words and order of the 1-2-3 hierarchy. Synonyms for the words and/or an alternative order simply will not work. *See Borland II* at 213-14, Pet.App. 122a-125a. As the district court observed, "the exact hierarchy – or structure, sequence and organization – of the menu system is a fundamental part of the functionality of the macros." *Paperback* at 65, Pet.App. 229a.¹⁶

B. The Development of the Borland Products.

Borland's objective was to design spreadsheets that were far superior to existing spreadsheet products, not to produce a Lotus look-alike or "clone." *See, e.g.*, JA 575-76 (Bosworth Depo.). It took Borland's team of engineers nearly three years to produce Borland's first spreadsheet, Quattro. *Id.* at 541-43. As the Court of Appeals observed, Pet.App. 4a, Quattro included enormous innovations over competing spreadsheet products, including Lotus 1-2-3.¹⁷

¹⁶ Obviously, a user cannot write a 1-2-3 macro – *i.e.*, use the words and order of the 1-2-3 hierarchy as a programming language – unless those words and their order are displayed to the user. Similarly, if the user is writing the macro for use by others, those users cannot rewrite, debug (*i.e.*, correct) or modify the macro (nor can the author) without visual access to the 1-2-3 hierarchy. *See, e.g.*, JA 763 (Warfield Depo.). While some macros can be executed (*i.e.*, run by the program) without the command words being displayed, the district court found that macros which require input from the user to complete their execution – "interactive macros" – require display of the exact words and order of the hierarchy to enable execution. *See Borland IV* at 227, Pet.App. 32a.

¹⁷ These features, affecting the program's functionality, user interface and menu command hierarchy, were set forth in detail in Borland's S.J. Br. (Dkt. 141) at 52, 53 and specifically cited to the Court of Appeals. *See Borland 1st Cir. Br.* at 16.

Quattro Pro was first introduced in 1989 and won every major award for spreadsheet excellence given in the software industry. *See Borland's S.J. Br.* (Dkt. 141) at 2. Lotus' assertion that the record lacks proof as to the "inherent product superiority" of Borland's programs, *Lotus Br.* at 15, is simply incorrect. Borland's proof in both the district court and the Court of Appeals came from Lotus' own documents. For example, Quattro Pro invariably ranked substantially higher than 1-2-3 in head-to-head reviews and user comparisons, including those conducted by Lotus.¹⁸ As early as 1988, a Lotus internal study showed that 1-2-3 users no longer considered the 1-2-3 user interface as the best user interface. JA 832. Lotus spreadsheets were viewed as far less technologically advanced than those of either Borland or Microsoft. JA 882-883. And Lotus' own "Quattro Pro Displacement Study" stated that two-thirds of spreadsheet users rated Quattro or Quattro Pro as the best spreadsheet on the market. JA 864.¹⁹

The Borland products were written in wholly original code. Lotus' brief seems to imply some similarity of code by stating that the menu words are "spelled out, in text, in the program code," *Lotus Br.* at 7, but any such suggestion is wholly without support. At no time in the proceedings below did Lotus ever claim code similarity or that Borland copied Lotus' computer code, nor was the code of any product ever submitted as evidence at any point in the proceedings below.²⁰ In fact, the district court expressly held

¹⁸ JA 821-826; *Borland S.J. Br.* (Dkt. 141) at 2; *Borland 1st Cir. Br.* at 17.

¹⁹ S.J. Ex. 14, 27, 40 (Dkt. 142) [Dkt. 164, JA79]. Nor did the Court of Appeals fail to "realize that there were newer versions of Lotus' products" in the record. *Lotus Br.* at 15 n. 25. Rather, as Borland argued to the Court of Appeals, *Borland 1st Cir. Br.* at 2, the Complaint charges infringement of only Releases 1.0, 1A and 2.0 of the Lotus product, and subsequent versions were placed in the record over Borland's objections. JA 15-16 (Compl.). The record demonstrates that Lotus copied into these subsequent versions of its own product features unique to Quattro at the time of Quattro's release. These features are described in detail at *Borland S.J. Br.* (Dkt. 141) at 53.

²⁰ Lotus' record cites refer only to a portion of a Borland data file which was placed in the record to show the existence of an abbreviated version of the Lotus menu tree. While Lotus asserts that the menu words were "hidden inside" the Borland program, *Lotus Br.* at 15, it is uncontested that "the menus themselves are divorced from being any part of any executable code." JA 792 (Warfield Depo.).

that code was not at issue in the case. Trial Tr. of Apr. 1, 1993, (Dkt. 404) JA 299-300.

The user interface of Quattro Pro is different in every respect (save some of the command words) from that of the 1-2-3 versions at issue in this case. Indeed, the differences in user interface are so striking that, as the First Circuit noted, Lotus did not even cross-appeal from the district court's finding that the Borland interface "looks substantially different from the 1-2-3 user interface." *See Lotus v. Borland* at 18, Pet.App. 9a-10a; *Borland II* at 220, Pet.App. 137a.²¹

The Quattro products were shipped with a number of different menu command hierarchies. In both products, a completely original menu command hierarchy is the "native" or default mode that is automatically presented to the user. The user is required to install any of the alternative hierarchies, including the 1-2-3 compatible hierarchy. Although Lotus suggests that users would readily employ the compatible menus to manipulate the spreadsheet, Lotus Br. at 13, Lotus' own documents belie any such suggestion. Lotus' 1990 study, for example, confirmed that Quattro users use the native menus for spreadsheet functionality, reserving the 1-2-3 compatible modes to run macros, which "continues to be important, because users frequently exchange files with 1-2-3 users." JA 871.²² S.J. Ex. 27 (Dkt. 142) [Dkt. 164, JA 78-79].

Similarly, Lotus made no showing whatsoever as to any relationship between its menus and its own code, and it would be technically incorrect to infer any specific relationship between the code and the commands of the screen. *See, e.g.*, JA 450 (Liddle Decl.).

²¹ Figures 1 and 2 in the Appendix to this Brief (pp. A-1, A-2) compare the Lotus and Borland screen displays, as the programs look when engaged in the same operation. JA 979-80. *See also* Borland's S.J. Demo Video (Dkt. 90) [Dkt. 164, JA 78-79], copies of which are lodged in the clerk's office.

²² The menus that provide 123-compatibility in Borland's products are not merely a copy of the 1-2-3 command hierarchy. Rather, the 123-compatible menus also contain all of the functionality of the command sets from the native mode. As a result, the 1-2-3 menu command hierarchy sequences, designed by Lotus for a different menu presentation and function set, is clumsy and dysfunctional when used with the Quattro and Quattro Pro menu presentations. JA 565-566 (Bosworth Depo.); JA 520-522 (Olson Decl.). According to a study conducted by Burke Marketing Research, one of the largest and most respected market research

As the Court of Appeals explained, Pet.App. 4a-5a, Borland incorporated 1-2-3 hierarchy command sequences into the visual display of its compatible mode for two reasons: first, to enable spreadsheet users who were already familiar with Lotus 1-2-3 "to switch to the Borland programs without having to learn new commands," and second, because there was no other way to achieve complete macro compatibility – i.e., to enable users to run, modify and debug macros originally created for use in 1-2-3.²³ The designers of the Borland products neither contemplated nor desired that the 1-2-3 commands be used routinely in place of the native command hierarchy.²⁴

C. Market Effects

Lotus asserts that the anticompetitive effects flowing from its assertion of copyright protection are not sufficiently documented in the record to support the First Circuit's decision. *See Lotus Br.* at 15-16, 45-47. Specifically, Lotus claims that Judge Boudin's discussion of both user "lock in" and appropriation by Lotus of end user investment in the hierarchy are "without record support" and "derived from a non-existent record." *Id.* at 45, 16. This argument is preposterous.

In its initial summary judgment memorandum, Lotus argued that its user interface, specifically its menu command hierarchy, was the most important part of its product. JA 366 (Galler Decl.). Borland countered that Lotus' particular words and order were not

organizations in the country, only about 12% of Quattro and Quattro Pro users use the 123-compatible menus. Indeed, two-thirds of those who have *ever* used the 123-compatible menus cite the running of 1-2-3 macros as a reason for doing so, and 35% use the compatible menus *only* when someone else gave them a worksheet with 1-2-3 macros. JA 308 (Boyd Decl.).

²³ JA 656-57, 658-59 (Kahn Depo.); JA 553-555 (Bosworth Depo.). Lotus incorrectly asserts that Borland's executives "could not swear" that macro compatibility "was *necessary* to allow Borland to offer a commercially viable product," *Lotus Br.* at 15 (emphasis in original). As Borland's president put it, "macro compatibility was the key to being able to have a product that could have any chance in the marketplace." JA 657 (Kahn Depo.).

²⁴ JA 656-57 (Kahn Depo.); JA 566 (Bosworth Depo.).

commercially significant at the time of the first release of Lotus' product, *see, e.g.*, JA 454 (Liddle Decl.); JA 507 (Olson Decl.), and Lotus responded that the precise words and order of its hierarchy became extremely valuable through the investments of users and other third-parties, *see, e.g.*, JA 600-01 (Emery Depo.) – a conclusion with which Borland agrees.

As a consequence of Lotus' strategy, Borland was able to compile an exhaustive record of market effects, based solely on the testimony of Lotus' executives and expert witnesses and on the text of Lotus' documents. Judge Boudin's comparison of the Lotus menus to the QWERTY keyboard, Pet.App. 24a, 26a, for example, is no more than an echo of the testimony of Lotus senior executive Frank Ingari, who argued that the "fingertip knowledge" of "millions" of 1-2-3 users, comparable to how "you and I might type on a Qwerty keyboard," provides "an extremely strong incentive for users to stay with Lotus." JA 649-50. Lotus expert James Emery agreed, arguing that users "would be unwilling to change" from the 1-2-3 menus because that would not only involve "foregoing" the "learning that they invested in it, but a whole set of auxiliary advantages of third [party] products, trained user population, textbooks, et cetera." JA 601 (depo.).

Indeed, the most compelling testimony concerning market effects came from Emery, who, in describing how the Lotus menus came to be valuable, delivered a textbook definition of what economists call a "network effect":

There tends to be a whole structure that grows up around the successful product and we get a positive feedback mechanism, that the value of a product increases greater value, which in turn, further increases the value through all these ways.

JA 600-01 (depo.). Emery therefore concluded that the value of the 1-2-3 menus "lies precisely in the familiarity that millions of 1-2-3 users have acquired with them." JA 343-44 (decl.); JA 600 (depo.).

The Lotus documents tell an equally compelling story. The Lotus documents show that 1-2-3's market dominance was wholly attributable to the fact that, at the time of its market release, 1-2-3 was superior to VisiCalc, the only real competition at the time. JA 833. By 1988, "the vast majority of PC users had chosen 1-2-3 as their spreadsheet. That decision was made when 1-2-3 first came

out. . . ." *Id.* The documents explain that 1-2-3 *continued to be* successful because of the users' "investment" in "learning" and macros enabled 1-2-3 to lock in those users who first selected it over VisiCalc. *See* JA 877. As a result of the users' investment, 1-2-3 became, in the words of Lotus' own documents, "entrenched."²⁵ S.J. Ex. 14, 38 (Dkt. 142) [Dkt. 164, JA 78-79].

Hence, unless a new entrant in the spreadsheet market could compete for the business of the "vast majority of PC users" who initially chose 1-2-3 over VisiCalc, competition would be limited solely to new spreadsheet users, a minor portion of the market. There would have been little, if any, business to compete for; "no one" in Lotus' internal study, for example, "was using Quattro [Pro] as their first-time spreadsheet." JA 868. "Macro compatibility" according to Lotus documents, was "the most important item" to these spreadsheet users. "Macro compatibility is KEY." JA 834, 836. S.J. Ex. 14, 27 (Dkt. 142) [Dkt. 164, JA 78-79].

The Lotus documents also demonstrate that 1-2-3 users did not continue to support Lotus' product because they viewed it as superior. On the contrary, by the time of Lotus' 1990 study, "most of the 1-2-3 users did not necessarily think 1-2-3 was better, they just thought it was the product they were used to." JA 871. But because of their sunk investments, users were locked into the 1-2-3 menu command hierarchy.

Even Lotus itself was "locked in." Lotus' president Jim Manzi testified to the importance of macro compatibility in the context of a problem that arose when a version of 1-2-3, Release 2.0, was only "99-44/100 percent compatible" with previous versions. JA 715 (Manzi Depo.). Although Release 2.0 was only "off by 56/100 of a percent in terms of compatibility," Lotus was required to re-engineer "on a breakneck pace Release 2.01 to achieve 100 percent

²⁵ JA 880 (1987 Lotus marketing report stating that "there have been a number of spreadsheet products on the market that have had greater functionality than 1-2-3," but these products "have not made a significant dent in our market share due to a number of reasons, including the entrenchment of 1-2-3 [and] the investment by customer organizations in training and applications development. . . ."); JA 871 (1990 Lotus study stating "[t]here is still an entrenched 1-2-3 user base out there," noted that users were "too familiar with 1-2-3 to try to change to something else"). S.J. Ex. 27, 39 (Dkt. 142) [Dkt. 164, JA 78-79].

compatibility, because we made an awful lot of customers angry."²⁶
Id.

The benefits of these market effects to Lotus are well-documented in the record. At the beginning of 1988, less than two months after the original Quattro product was released (and about two years before Quattro Pro was released), Lotus announced that 1-2-3 held 70% of the spreadsheet market, and that "[i]f at the end of 1988 we still own that 70%, we're home free." JA 928 (1988 Sales Speech) S.J. Ex. 24 (Dkt. 142) at 13 [Dkt. 164, JA 78-79]. In 1990, shortly after Quattro Pro was released (and after this lawsuit was filed), Lotus' President and CEO announced that 1-2-3 still held a 70% market share. JA 922 (Manzi 1990 PC Users Group Speech) S.J. Ex. 37 (Dkt. 142) at 7 [Dkt. 164, JA 78-79]. Finally, in August of 1992, at the time that Borland removed the 123-compatible mode from its products in response to the *Borland II* decision, Lotus claimed, based upon data published by the Software Publishers Association, that 1-2-3 still had 70% of the market. *Wall St. J.*, Aug. 13, 1992, at A5, JA 920.²⁶

Lotus' brief invites the Court to ignore this record and rely instead on Lotus' extra-record assertion that the Lotus product by 1993 fell "far behind" that of Microsoft Corp., Lotus Br. at 16, as a basis for concluding that the First Circuit had a "deeply flawed understanding," *id.* Extra-record assertions are not necessary to explain Microsoft's success; the district court record contains ample explanation. Lotus declined to sue Microsoft, and hence, Microsoft was able to offer a 1-2-3 compatible spreadsheet while Borland was enjoined from doing so. *See, e.g., Borland IV* at 230, Pet.App. 39a (district court declines to rule on Microsoft's copying of the 1-2-3 menu hierarchy). A screen shot from the record below

²⁶ [Dkt. 320, 190:25]. The significance of these market effects was argued by Borland to the district court, and the district court twice held, at Lotus' urging, that lock-in with respect to macro compatibility was irrelevant to the issue of copyrightability. *Borland IV* at 233, Pet.App. 45a-46a; *Borland II* at 214, Pet.App. 124a. When a number of the user groups sought to argue before the district court, the court refused to hear them. *See Tr. of Aug. 19, 1993 Conf.* at 14 (Dkt. 406).

of the Microsoft product displaying the Lotus menus is found at A-5 in the Appendix.²⁷ JA 983.

D. Procedural History of the Case

The procedural history of the case is summarized in *Lotus v. Borland* at 810-12, Pet.App. 5a-10a. This lawsuit was filed on July 2, 1990. In the *Borland I* decision the district court ruled that as of March 20, 1992, almost two full years into the case, Lotus still had "not formulated for the court or for Borland its precise contentions . . . as to which elements of 1-2-3, separately or in combination, were copyrightable or were copied." *Borland I* at 98, Pet.App. 180a. Nevertheless, the district court relegated § 102(b), the list of what is not copyrightable, to mere "abstraction[s]," and held that copyright protection attaches to any and all words through which a system, process or method of operation is stated. *Id.* at 91, Pet.App. 167a.

On July 31, 1992, the district court issued its *Borland II* decision. The district court's principal holding, clearly set out in the Procedural Order that accompanied the opinion, was that "[t]he menu commands and menu hierarchy of Lotus 1-2-3 have expressive aspects and are copyrightable." Proc. Ord. (Dkt. 195) at 19. On three separate occasions after the *Borland II* decision, Borland moved to certify for interlocutory appeal the menu command hierarchy's copyrightability, but the district court denied all three motions,²⁸ and instead insisted on holding trials that even Lotus' counsel argued were unnecessary. *See, e.g., Tr. of Jan. 14, 1993 Hearing* (Dkt. No. 310) at 53-54.

The first of these trials resulted in the *Borland III* decision in which the district court held that there were functional alternatives

²⁷ A more complete understanding of the reasons for Microsoft's success would require additional extra-record facts. Microsoft was able to supplant 1-2-3 only by publishing a new operating system (Windows), migrating users to that new operating system, and releasing a new spreadsheet for the new operating system before supplying Lotus with the technical information necessary to publish 1-2-3 for the new operating system.

²⁸ *See Tr. of Sept. 23, 1992 Hearing* (Dkt. No. 241) at 54; *Tr. of Oct. 16, 1992 Hearing* (Dkt. No. 242) at 15-17; *Tr. of Aug. 19, 1993 Hearing* (Dkt. No. 406) at 42-43.

to the 1-2-3 menu command hierarchy at the time of its creation (something Borland has never contested). In *Borland IV*, the district court held infringing Borland's "Key Reader" feature, which permitted limited macro compatibility. The district court reached this conclusion by holding that the menu command hierarchy was nothing more than "the selection and arrangement of executable operations," but was entitled to copyright protection as a "non-literal aspect of the computer program code." *Id.* at 232-33; Pet.App. 43a-45a.²⁹

Finding that the district court had misconstrued § 102(b) of the Copyright Act as well as the applicable case law, the First Circuit Court of Appeals reversed the district court decisions. The First Circuit's opinion relied on the express language of the statute that forbids copyright protection for "methods of operation" and "systems."³⁰ Judge Boudin filed a separate opinion in which he concurred in the majority's reasoning as well as its conclusion. *Lotus v. Borland* at 821, Pet.App. at 27a-28a. Judge Boudin went on to explain that extending copyright protection to the command words at issue, as the district court had done, is at variance with the intent of Congress and is both inefficient and anticompetitive from an economic perspective.

²⁹ The district court also held that there are two methods to execute some 1-2-3 macros, "one time macro translation," and "on-the-fly" interpretation. *Borland IV* at 230, Pet.App. 38a-39a. The district court held that it is impossible to provide "on-the-fly" interpretation (the method used by Borland) without including a "copy" of the Lotus menu structure, *id.*, and held that method infringing because it employs the 1-2-3 menu structure, *id.* at 235, Pet.App. 48a. The district court also held that it is impossible to provide one-time translation without "copying" the 1-2-3 menu structure, but declined to decide whether one-time translation was a copyright infringement. *Id.*

³⁰ Lotus correctly notes that the First Circuit's opinion did not reach the merits of Borland's appeal on any of Borland's affirmative defenses, such as fair use, waiver, laches, and estoppel. Lotus Br. at 4 n. 6. If the First Circuit's decision is not affirmed, that court would have to decide those issues on remand, including Lotus' incorrect assertion that certain defenses were "abandoned." *Id.* The District Court's rejection of Borland's fair use defense is particularly erroneous in view of the intervening opinion in *Campbell v. Acuff-Rose Music, Inc.*, 114 S.Ct. 1164 (1994).

INTRODUCTION AND SUMMARY OF ARGUMENT

At the heart of this case is the question of the respective roles Congress intended for patent and copyright to play in providing protection for works such as the Lotus menu command hierarchy. In Lotus' brief, there is little acknowledgment that the dividing line between copyright and patent even is at issue. Indeed, Lotus has excised all reference to the patent law in its quotation of Art. I, § 8, cl. 8, the constitutional authorization for both sets of statutes. See Lotus Br. at 1, 19, 20. Similarly, Lotus has omitted any reference to the line that this Court drew between patent and copyright in its landmark decision in *Baker v. Selden*, 101 U.S. 99 (1879), even though that was the principal holding of the case.

Lotus asks this Court to hold that a software developer, through the mere assertion of copyright, can secure all the benefits of patent protection without meeting any of the statutory requirements, including "novelty," "nonobviousness," examination, and disclosure of "best mode." See 35 U.S.C. §§ 102, 103, 112, 131 (1995). Its principal argument in support of extending copyright protection to what the District Court repeatedly called Lotus' menu command "system,"³¹ is that Congress decided that such protection was appropriate when it endorsed copyright protection for "computer programs" in 1976. Lotus' reply to the distorting effects of its claim on both patent and copyright law seems to be: Congress has spoken. See, e.g., Lotus Br. at 45-49.

Lotus' argument is built upon a number of infirm foundations. The first, and perhaps most fundamental, is that the menu command hierarchy does not in fact come within the copyright statute's definition of "computer program," either on its own or as a product of the 1-2-3 code. Whatever the scope of copyright protection that Congress intended for "computer programs," this case falls outside of it. The menu command hierarchy is subject to the same regime as other works – the regime of *Baker v. Selden* and its progeny.

There are other, equally grievous flaws in Lotus' theory. Perhaps the most striking is Lotus' refusal to recognize any

³¹ See, e.g., Paperback at 66, Pet.App. 232a (multiple references to the menu command "system"); *Borland II* at 213, Pet.App. 123a (the menu "system" is "fundamental" to its "functionality" as a macro language).

delimiting concept on copyright other than the “idea/expression” dichotomy. The omission is particularly notable inasmuch as it requires Lotus to read all of the terms that follow “ideas” in Section 102(b)’s limitation on copyright – including words such as “process,” “method of operation,” and “system,” each with obvious roots in the patent law – as if they had no independent meaning whatsoever. Similarly, it leads Lotus to argue that the “goal of copyright” is to promote the “useful [a]rts,” Lotus Br. at 24 (emphasis in original), thus seeming to overlook the fact that since 1793 the protection of the useful arts has been expressly the subject of the *patent* statute, not copyright.³²

Also missing from Lotus’ argument is any acknowledgment that the copyright and patent laws both are subject to the limitation, Constitutional in origin, that they must “ultimately serve the public good.” *Fogerty*, 114 S.Ct. at 1029. Federal intellectual property rights are not free: they deprive future creators and the public at large of the free enjoyment and use of “writings” and “discoveries.” The scales accordingly are weighted against the grant of a right of private monopoly: free exploitation by the public is the rule, not the exception. *Feist Publications, Inc. v. Rural Telephone Svc. Co.*, 499 U.S. 340, 349-350 (1991); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 156-157 (1989). The creation of a private federal monopoly is appropriate only to the extent that it is necessary to ensure the promotion of new works. *Fogerty*, 114 S.Ct. at 1029; *Bonito Boats*, 489 U.S. at 150-151.

At the heart of both copyright and patent, therefore, is a careful balance between what is left in the public domain and what may be restricted to private use. Because these two intellectual property regimes cover different subjects, however, they strike the balance in different places. As Judge Boudin noted in his concurring opinion in the Court of Appeals, copyright is not unduly concerned with overprotection of writings, because the cost is relatively slight: a “mistake” would simply mean that “subsequent authors treating the same themes must take a few more steps away

³² See Act of Feb. 21, 1793, § 1, 1 Stat. 319 (statutory subject matter of patent is “any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement [thereof]”).

from the original expression.” *Lotus v. Borland* at 819, Pet.App. at 23a.

In promoting the “discoveries” of “inventors,” patent law strikes a different balance. Because a mistaken grant of monopoly in the most efficient or effective machine or process is more costly to the public than a monopoly on the text of *Hamlet*, patent sets the standard for a grant of private monopoly far higher: the work must be novel and nonobvious, there must be disclosure of the best mode known for carrying out the invention, and so forth. Moreover, because technological innovation most often consists of refinements and small steps, the patent law limits protection to the inventor’s enumerated claims, and substantial deviation from even one of the claim’s recited elements takes the later inventor outside of the patent.

In this case, Lotus’ menu command hierarchy plainly was within the scope of the subject matter of the patent statute. Indeed, others, including Lotus’ parent, IBM, actually have obtained patents on similar menu displays as “processes” and “systems.” Lotus nevertheless contends that it should be able to obtain patent-like protection for its menu command hierarchy without any showing that its work constitutes an advance in the useful arts.

Arguing by analogy to the Copyright’s treatment of “useful articles,” Lotus contends that Congress could have provided narrow limits on the scope of protection for computer programs if it had chosen to do so. Lotus Br. at 30-31. In fact, however, that is precisely what Section 102(b) does, and what it was intended to do. In enacting Section 102(b), Congress made it clear that it did *not* intend for copyright protection for computer programs to cause a major shift in the balance between patent and copyright law. Indeed, it made it clear that a program’s “processes” and “methods,” such as the menu command hierarchy here, specifically were excluded from the scope of copyright protection. Therefore, the menu command hierarchy would be excluded under Section 102(b) even if it otherwise qualified for protection as a part of the Lotus 1-2-3 “computer program” under Section 102(a).

ARGUMENT

This Argument proceeds in two parts. Section I begins by addressing the part of the federal intellectual property scheme left out by Lotus – the patent laws. It then addresses this Court's decision in *Baker v. Selden*, and its recognition that copyright should not be used to end-run the standards required to obtain a mechanical or process patent. Section I concludes by showing that Section 102(b) was intended to incorporate this limitation on copyright, including copyright protection for computer programs.

Section II applies the terms of Section 102(b) to Lotus' claim. First, it shows that the menu command hierarchy is not protected as a "computer program" under Section 102(a), and hence is subject to the same rules as have traditionally been applied to expressive works. Second, it shows that while the menu command hierarchy may be a part of other "works of authorship" that qualify for protection under Section 102(a) – namely, the Lotus reference manual and the 1-2-3 screen display – it is an unprotected element under Section 102(b). Finally, it shows that the same result would obtain even if the "work of authorship" were considered to be the 1-2-3 "computer program."

I.

COPYRIGHT PROTECTION MAY NOT BE USED TO AVOID THE STATUTORY REQUIREMENTS OF THE PATENT LAWS.

Because copyright's central purpose is to "encourage others to build freely upon the ideas and information conveyed by a work," the Court has held that "it is peculiarly important that the boundaries of copyright be demarcated as clearly as possible." *Fogerty*, 114 S.Ct. at 1030. In drawing these boundaries, Lotus seemingly forgets that copyright is only one-half of the intellectual property scheme that Congress has devised. Copyright's contours cannot properly be marked out without considering the remainder of the Congressional scheme.

The "historic kinship" between patent law and copyright law, *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984), begins with the Constitution itself. See U.S.

CONST. art. I, § 8, cl. 8. The Patent and Copyright Clause was enacted against the backdrop of "this Nation's historical antipathy to monopoly," *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 530 (1972), and the patent and copyright laws share the same Constitutional limitation, which is that the monopolies they authorize "are limited in nature and must ultimately serve the public good." *Fogerty*, 114 S.Ct. at 1029.³³

Both statutes also have incorporated the Clause's terms in setting out the scope of their respective subject matters. On the one hand, the patent statutes, commencing with the 1793 statute authored by Thomas Jefferson, have defined patent's subject matter as including any "new and useful art,"³⁴ thereby drawing upon the Clause's authorization to "promote the useful Arts."³⁵ Copyright, on the other hand, has taken as its subject the "writings" of "authors," a requirement carried forward in Section 102(a)'s protection for "works of authorship."³⁶ Its goal was the promotion

³³ See also *Sony*, 464 U.S. at 429 (copyright); *Graham v. John Deere Co.*, 383 U.S. 1, 5-6 (1966) (patent).

³⁴ See Act of Feb. 21, 1793, § 1, 1 Stat. 319. Subsequent patent statutes employed the same broad language. See *Diamond v. Chakrabarty*, 447 U.S. 309 (1980).

³⁵ See H.R. Rep. No. 1923, 82d Cong., 2d Sess. 4 (1952) (observing that under U.S. Const. art. I, § 8, cl. 8, "Congress has the power to promote the progress of useful arts by securing for limited times to inventors the exclusive right to their discoveries. The first patent law and all patent laws up to a much later period were entitled 'Acts to promote the progress of useful arts.'").

³⁶ See 17 U.S.C. § 102(a) (1995) ("Copyright protection subsists, in accordance with this title, in original works of authorship . . ."). In employing the phrase "works of authorship," Congress sought to make it clear that it did not intend for the present Act to go to the limits of its constitutional authority. See H.R. Rep. No. 1476, 94th Cong., 2d Sess. 51 (1976). ("In using the phrase 'original works of authorship,' rather than 'all the writings of an author' now in section 4 of the statute, the committee's purpose is to avoid exhausting the constitutional power of Congress to legislate in this field, and to eliminate the uncertainties arising from the latter phrase"). Accordingly, some writings do not qualify as "works of authorship" under Section 102(a). *Id.* at 51-52.

Under the 1909 Act, some jurists, including Learned Hand, had interpreted the "writings of an author" provision as reaching the constitutional limit, see, e.g., *Capitol Records v. Mercury Records Corp.*, 221 F.2d 657, 664 (2d Cir. 1955) (L. Hand, dissenting), and Congress sought to clarify that the 1976 Act did not have

of “science,” a term used at the time to signify general knowledge.³⁷

It is a telling statement about the thrust of Lotus’ argument that it contends that the “goal of copyright” is to promote the “useful [a]rts.” Lotus Br. at 24 (emphasis in original). Having turned a blind eye to the patent law’s existence, Lotus effectively would interpret the copyright statute so as to subsume it. The patent law does exist, however; and the balance that Congress struck in the patent scheme has important consequences in establishing the limits of copyright.

A. The Patent Laws Carefully Limit the Extent to Which the “Useful Arts” May be Subject to Private Monopoly.

Three aspects of the patent statute are of particular significance for these purposes. First, the Court has construed the Clause’s command to “promote the . . . useful arts” as placing important limits on the circumstances under which Congress, consistent with its Constitutional mandate, could authorize “the embarrassment of an exclusive patent.” *Graham*, 383 U.S. at 9. In particular, the Court held that the Clause mandates the high bar that the patent law requires before an innovative work may be patented. The Court held, *id.* at 5-6 (emphasis in original):

such a reach. *See H.R. Rep. No. 1476 at 51.* (“Since the present statutory language is substantially the same as the empowering language of the Constitution, a recurring question has been whether the statutory and constitutional provisions are coextensive. . . . The bill avoids this dilemma by using a different phrase – “original works of authorship” – in characterizing the general subject matter of statutory copyright protection.”) Thus, Lotus’ contention that the language of Section 102(a) was intended to reach more broadly than its counterpart under the 1909 Act, *see* Lotus Br. at 20-21, presents an incomplete picture of the relationship between the two Acts. *See also H.R. Rep. No. 1476 at 51* (“The bill does not intend either to freeze the scope of copyrightable technology or to allow unlimited expansion into areas completely outside the present congressional intent”) (emphasis added).

³⁷ *See H.R. Rep. No. 1923 at 4* (“The purpose of [the first portion of the Clause] is to promote the progress of science by securing for limited times to authors the exclusive right to their writings, the word ‘science’ in this connection having the meaning of knowledge in general, which is one of its meanings today.”).

The Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose. . . . Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must “promote the Progress of . . . useful Arts.” This is the *standard* expressed in the Constitution and it may not be ignored.

Second, the Court has held that the patent system is predicated upon the public’s ability to trade freely in that which does *not* meet the patent statute’s standards for patentability. In *Bonito Boats*, 489 U.S. at 156, the Court observed: “[T]he efficient operation of the federal patent system depends upon substantially free trade in publicly known, unpatented design and utilitarian conceptions.” The system would be undermined by a law which provided “patent-like protection” to “the functional aspects of a product which had been placed in public commerce absent the protection of a valid patent.” *Id.*

In *Bonito Boats*, the Court dealt specifically with the question whether a state law which provided protection to unpatented works undermined the careful balance struck by Congress. Its analysis would apply equally, however, to the use of copyright in a way not intended by Congress that had the result of avoiding patent’s novelty and nonobviousness requirements. The Court stated, *id.* at 156-157:

Both the novelty and the nonobviousness requirements . . . provide the baseline of free competition upon which the patent system’s incentive to creative effort depends. A . . . law that substantially interferes with the enjoyment of an unpatented utilitarian or design conception which has been freely disclosed by its author to the public at large impermissibly contravenes the ultimate goal of public disclosure and use which is the centerpiece of federal patent policy. Moreover, through the creation of patent-like rights, the [statute] could essentially redirect inventive efforts away from the careful criteria of patentability developed by Congress over the last 200 years.

Finally, for those inventions that overcome the hurdles to patentability, Congress has provided patentees with an explicit and powerful right to exclude, *see 35 U.S.C. § 154 (1995)*, articulated in the patent case law as the right to control “use” of the patented invention, including “use” by end users.³⁸ The patentee’s right to control “use” also includes the use of connecting to other devices – what would be known as “interface specifications” in technology jargon.³⁹ Copyright accords no such rights: it does not prevent the “use” of what is copyrighted, but focuses on the author’s right to “reproduce the copyrighted work in copies.” 17 U.S.C. § 106(1) (1995). As Judge Boudin found, however, in the part of the record that Lotus refuses to acknowledge, it is precisely the right to control “use” of the program by end users – in this case, their right to use the program in connection with Borland’s product – that Lotus seeks to obtain without having shown its entitlement to patent.

B. *Baker v. Selden* and its Progeny Have Rejected the Use of Copyright to Circumvent the Requirements of the Patent Statute.

The central features of the balance that Congress has struck regarding patentability – a high bar to obtain a monopoly, and free use of that which falls below the bar – plainly are jeopardized if patent-like protection can be obtained through copyright without meeting any requirement other than “originality.” Lotus has sought to minimize the significance of this disruption by suggesting that it happens all the time. Thus, Lotus has emphasized that copyright protection traditionally has been available for “useful” works such as maps, charts, and dictionaries. Lotus Br. at 24.

It is certainly true that these works are “useful” insofar as a map helps us to get from place to place, a dictionary helps us to know the meaning of words, and a telephone book helps us to

³⁸ See, e.g., *Beedle v. Bennett*, 122 U.S. 71, 78 (1887); *Coakwell v. United States*, 372 F.2d 508, 510-11 (Ct. Cl. 1967).

³⁹ See, e.g., *In re Hayes Microcomputer Prods. Patent Litig.*, 982 F.2d 1527 (Fed. Cir. 1992) (patent for controlling the mode of operation of a modem, or device to allow two computers to communicate over telephone lines, valid and infringed).

make telephone calls. The “usefulness” of such works does not, however, advance Lotus’ claim that copyright protects the *functional* aspects of a work. The distinction is illustrated in the present Copyright Act’s definition in Section 101 of “useful article”: a “useful article” is an article “having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.” Maps, dictionaries, and telephone books, though “useful,” are not “useful articles,” because they “merely . . . convey information.”

Lotus’ menu command hierarchy, by contrast, has “an intrinsic utilitarian function” – the words are commands that cause operations to be performed.⁴⁰ The question of how to treat works that have such an intrinsic utilitarian function is not a new one. To the contrary, it lies at the heart of *Baker v. Selden* and its progeny.

I. The Court’s *Baker v. Selden* Decision

In *Baker*, Selden had written a book that explained a particular system of bookkeeping, and had included a series of forms, consisting of ruled lines and headings, that illustrated the system and showed how it was to be used in practice. 101 U.S. at 100. Selden urged that “the ruled lines and headings, given to illustrate the system, are a part of the book and, as such, are secured by the copyright.” *Id.* at 101. Like Lotus, Selden argued that his work was “useful,” and referred the Court to copyright’s traditional protection of maps and charts. *Baker*, 25 L.Ed 841, 842 (argument of appellee). Also like Lotus, Selden contended that his copyright in the book gave him the right to prevent others from “using substantially the same ruled lines and headings which he has appended to his books in illustration of it.” 101 U.S. at 101.

The Court rejected Selden’s claim. The Court agreed that Selden had a lawful copyright in the book he wrote explaining his

⁴⁰ See, e.g., *Borland II* at 206-207, Pet.App. 110a (“The keystroke sequences and macro language have functionality. Typing (“inputting,” in jargon) the first character of a command word invokes the command and causes the operation associated with the command word to be performed. . . . The menu command hierarchy is a fundamental part of the functionality of keystroke sequences and the macro language.”); *Borland IV* at 231, Pet. App. 41a (what Lotus seeks to protect is the “selection and arrangement of executable operations”).

accounting system. *Id.* at 102. Selden's copyright, however, did not give him exclusive rights to the use of his forms. The reason lay in "the difference between the two things, letters patent and copyright." *Id.* The Court gave the example of the author of a book on perspective who failed to get a patent on the mode of drawing described in the book. The author could not prevent others from using the mode of drawing that the book described, even if the book's illustrations "are reproduced in practice in the application of the art." *Id.* at 103.

As the Court emphasized, to allow the copyright in a book to extend to the methods that it illustrates would be fundamentally at odds with the patent law. Selden might or might not have been able to obtain a patent in his system; however, "it was not patented, and [now] is open and free to the use of the public." *Id.* at 104. The Court explained, *id.* at 102, in reasoning that foreshadows *Bonito Boats*:

The copyright of the book, if not pirated from other works, would be valid without regard to the novelty or want of novelty of its subject-matter. The novelty of the art or thing described or explained has nothing to do with the validity of the copyright. To give to the author of the book an exclusive property in the art described therein, when no examination of its novelty has ever been officially made, would be a surprise and a fraud upon the public. That is the province of letters patent, not of copyright. The claim to an invention or discovery of an art or manufacture must be subjected to the examination of the Patent Office before an exclusive right therein can be obtained; and it can only be secured by a patent from the government.

The decision in *Baker v. Selden* thus did not, as Lotus contends, exclude only "ideas" from the scope of copyright protection. Baker was free to use not only Selden's ideas, but his forms as well; as Professor Kaplan has observed, "the [*Baker*] privilege extends to exact copies." Benjamin Kaplan, AN UNHURRIED VIEW

OF COPYRIGHT 64 (1967).⁴¹ Under *Baker*, there is not just one delimiting concept by which the boundaries of copyright protection are set. Rather, there are two: the exclusion of ideas, and the exclusion of matter more properly the subject of patent.

2. Cases following *Baker v. Selden*

In the century since *Baker v. Selden*, courts routinely have declined to extend copyright protection to matter that falls within the scope of the useful arts.⁴² In *Taylor Instrument Cos. v. Fawley-Brost Co.*, 139 F.2d 98 (7th Cir. 1943), cert. denied, 321 U.S. 785 (1944), for example, the plaintiff manufactured a paper chart that provided a graphical record of hourly temperature when used in conjunction with the plaintiff's writing machine. The defendant manufactured paper charts that copied the defendant's arced and

⁴¹ Indeed, the Court's holding on the matter would seem to be unambiguous. The Court held, 101 U.S. at 107 (emphasis added): "The conclusion to which we have come is that blank account-books are not the subject of copyright; and that the mere copyright of Selden's book did not confer upon him the exclusive right to make and use account-books, ruled and arranged as designated by him and described and illustrated in said book."

Lotus nonetheless has urged that the case should be read as turning on the extent of the similarities between Baker's and Selden's forms; according to Lotus, Baker would have been found to have infringed if he had copied Selden's forms more closely. Lotus Br. at 34-36. The Court's decision, however, cannot be squared with Lotus' analysis. Indeed, Lotus has had to rely on facts outside the opinion even to make the argument, because one cannot tell how closely Baker followed Selden from the decision itself. It simply was not a focus of the Court's analysis: the Court was concerned with Selden's words, not with Baker's, and with Selden's ability to monopolize his system by monopolizing the forms. Lotus' analysis would render the Court's analysis of the distinction between patent and copyright superfluous, and simply cannot be reconciled with many portions of the opinion. See, e.g., *id.* at 103 (copyright "cannot give to the author an exclusive right to the methods of operation which he propounds, or to the diagrams which he employs to explain them, so as to prevent an engineer from using them whenever occasion requires").

⁴² See, e.g., *Brief English Sys., Inc. v. Owen*, 48 F.2d 555, 556 (2d Cir. 1931) (copyright does not provide exclusive right to use system of shorthand; "the way to obtain the exclusive property right to an art, as distinguished from a description of the art, is by letters patent and not by copyright"), cert. denied, 283 U.S. 858 (1931). See also *Crume v. Pacific Mut. Life Ins. Co.*, 140 F.2d 182 (7th Cir. 1944) (method of business reorganization), cert. denied, 322 U.S. 755 (1944); *Affiliated Enter. v. Gruber*, 86 F.2d 958 (1st Cir. 1936) (promotional system).

circular lines in order to make them "compatible" with the defendant's machine. Applying *Baker v. Selden*, the court concluded that the chart "neither teaches nor explains the use of the art. It is an essential element of the machine; it is the art itself." *Id.* at 100. As such, it was properly protected, if at all, by obtaining a utility patent.

Lotus nonetheless has contended that this aspect of *Baker v. Selden* and its progeny was reversed by the Court in *Mazer v. Stein*, 347 U.S. 201 (1954). See Lotus Br. at 25. The *Mazer* decision, however, does not support Lotus' claim. The question presented in *Mazer* was whether there could be overlap between the copyright law and *design* patents, which reward creators for their "ornamental design[s]." 347 U.S. at 216. As *Mazer* found, overlap between design patents and copyright long has been recognized by the courts. *Id.* at 215 n.33. Indeed, in *Baker v. Selden* itself, the Court expressly stated that "[o]f course, these observations are not intended to apply to ornamental designs." 101 U.S. at 103. The Court recognized that with ornamental designs, as with copyrighted works, "their form is their essence"; allowing a monopoly in such ornamental features accordingly imposed no undue cost on the public. *Id.*

As *Mazer* expressly recognized, a *different* result has obtained, beginning with *Baker* itself, in cases dealing with utility patents. Thus, *Mazer* noted that while courts had found an area of overlap between design patents and copyright, "a different answer has been given by the courts" with respect to "the mechanical patent law and copyright laws." 347 U.S. at 215 n.33. Of the two cases cited with approval by the Court for this point, one was the *Taylor Instrument* case. Thus, far from providing support for Lotus' theory of overlap, *Mazer* reconfirmed the continuing vitality of *Baker v. Selden*'s distinction between patent and copyright. Selden's forms and Taylor's charts were not outside of copyright protection because they were "ideas," but because they were within the province of the "useful arts," and the extension of protection to these works would have undermined the patent regime.

C. Section 102(b) Incorporates the Limitation on Copyright Protection For Utilitarian Functions.

According to Lotus, Section 102(b) was intended to do no more than exclude "~~idea[s]~~" from the scope of copyright protection. Invoking the principle of *noscitur a sociis*, Lotus contends that the seven words listed after "idea" in the statute are "undifferentiated," or, in plainer English, redundant. Lotus reasons that "process[es]" or "method[s] of operation" could be construed so broadly as to cover computer programs themselves; that Congress intended for computer programs to be copyrightable; and that accordingly these terms (and the remaining terms of Section 102(b)) should not be given any independent meaning whatsoever. Lotus Br. at 29-30. Lotus urges that when the Court reads "method of operation," it should substitute "idea" instead. *Id.* at 29.⁴³

The drastic surgery that Lotus proposes in interpreting Section 102(b) is unwarranted. Generally, of course, the Court "will avoid a reading which renders some words altogether redundant." *Gustafson v. Alloyd Co., Inc.*, 115 S. Ct. 1061, 1069 (1995). Here, the remaining words of Section 102(b) are neither obscure nor redundant: they are drawn directly from the patent law. Moreover, the legislative history shows that they were central to the limits that Congress sought to impose on the scope of copyright protection for computer programs. Far from being awkward surplusage, therefore, they are critical to ascertaining the boundaries on copyright protection of computer programs under Section 102(b).

I. The Terms in Section 102(b) are Drawn From the Patent Law.

In invoking *noscitur a sociis*, Lotus may seem to suggest that "process" and "method of operation" are words "of obscure or

⁴³ This argument also is central to the two *amicus* briefs filed on Lotus' behalf. See *Brief Amicus Curiae* of American Intellectual Property Law Association at 8 n.10 (Section 102(b) terms are used "interchangeably"); *Amicus Curiae* Brief of Digital Equipment Corporation, The Gates Rubber Company, Intel Corporation and Xerox Corporation at 10 n.8 ("unless the context dictates otherwise," the amici would "refer to all of the categories of unprotectable matter listed in Section 102(b) collectively as ideas").

doubtful meaning." *Russell Motor Car Co. v. United States*, 261 U.S. 514, 520 (1923). Nothing, however, could be further from the truth. As noted previously, the patent statutes commencing in 1793 all extended protection to any "new and useful art." *Chakrabarty*, 447 U.S. at 308-09. In 1952, when the patent laws were recodified, Congress made one change to Jefferson's language: it replaced the word "art" with "process." *Id.* at 309. "Process" thus lies at the very heart of the patent statute; and, if one were to carry forward *Baker v. Selden*'s exclusion from copyright of the "useful arts," the way to express that in the present-day language of the patent laws is to use the term "process."⁴⁴

The patent-law derivation of the terms "method of operation," and "system" is no more difficult to find. Both "method of operation" and "system" were used in *Baker v. Selden* to describe that which "is the province of letters patent, not of copyright." See 101 U.S. at 102-104.⁴⁵ Indeed, since *Baker v. Selden*, copyright cases often have used the term "system" to describe matter that

⁴⁴ See 35 U.S.C. § 101 (1995). Although only recently codified, "process" and "useful art" have been treated as largely equivalent terms in the patent law for many decades. See, e.g., *Expanded Metal Co. v. Bradford*, 214 U.S. 366, 382 (1909) ("The inventor of a new and useful art is distinctly entitled to the benefit of the statute as well as he who invents a machine, manufacture, or composition of matter. The word 'process' has been brought into the decisions because it is supposedly an equivalent form of expression, or included in the statutory designation of a new and useful art.").

⁴⁵ The terms "process" and "method" often are used interchangeably in the patent law. See, e.g., 35 U.S.C. § 100(b) (1995) ("The term 'process' means process, art or method"). Methods "of operation," however, may be considered to have a more specific meaning, as reflected in the Court's decision in *Expanded Metal*, 214 U.S. at 382. Prior to *Expanded Metal*, it had been unresolved, as counsel in that case put it, whether "processes involving mechanical operations, as distinguished from chemical reactions or elementary changes, are unpatentable." *Expanded Metal*, 53 L.Ed. 1034, 1035. After *Expanded Metal* upheld their patentability, such method claims often have been described as a method "of operating" a particular machine. See, e.g., *Application of Moreton*, 288 F.2d 708, 709 (C.C.P.A. 1961) (claim for a "method of operating the hydraulic system of an aircraft"); *Application of Horvath*, 211 F.2d 604, 606 (C.C.P.A. 1954) (claim for a "method of timing succeeding toaster operations"); *Application of Schutt*, 210 F.2d 293, 294 (C.C.P.A. 1954) (claim for a "method of operating a continuously cycling automatic concrete block machine").

falls within the ambit of patent rather than copyright. See, e.g., *Affiliated Enters. v. Gruber*, 86 F.2d 958 (1st Cir. 1936) (promotional system); *Brief English*, 48 F.2d at 556 (system of shorthand); *Amberg File & Index Co. v. Shea Smith & Co.*, 82 F. 314, 315 (7th Cir. 1897) (indexing system); *Griggs v. Perrin*, 49 F. 15 (C.C.N.D.N.Y. 1892) (shorthand system). In employing the term, Congress plainly intended to ratify and codify the line drawn in these cases. See *Davis v. Michigan Dept. of Treasury*, 489 U.S. 803, 813 (1989).

The derivation of "discovery" is, if anything, even more apparent: the term can be found in the Patent and Copyright Clause itself, in the portion of the Clause for which Lotus has substituted an ellipsis. As noted earlier, the Clause authorizes Congress to protect "inventors" in their "discoveries." Art. I, § 8, cl. 8. It would seem that Congress could not have put any more emphatically its intent to maintain the line between patent and copyright. The term "principle" also may be found to have roots in the patent law. Indeed, "principle" long has been used as the patent equivalent of "ideas," for which no patent can be obtained. See e.g., *LeRoy v. Tatham*, 55 U.S. 156, 174-175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right").

The derivation of "concept" and "procedure" is more obscure. The ordinary meaning of "concept" is an "abstract or generic idea," and the legislative history suggests that the term was intended to have that meaning.⁴⁶ See S. REP. NO. 983, 93d Cong., 2d Sess. 107-108 (1974) (in earlier version of proposed Section 102(b) which excluded "plans," "plans" were "distinguished from . . . the mental concept"). No patent can be obtained for a "concept" lacking a physical embodiment. See, e.g., *Voightmann v. Perkins*, 138 F. 56, 57 (7th Cir. 1905); *Application of Hortman*, 264 F.2d 911, 913 (Cust. & Pat. App. 1959). A "procedure" in ordinary use means "a particular way of accomplishing something or of acting," or "a series of steps followed in a regular definite order,"

⁴⁶ WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY 272 (9th ed. 1988) ("WEBSTER'S").

WEBSTER's, *supra* at 937, and it appears to have been used in that way in patent cases, either in describing steps in a process or method or sometimes as the equivalent of "process" itself.⁴⁷

In short, the terms in Section 102(b) are far from "undifferentiated." They establish, by their terms, Congress' clear intent that copyright should not be permitted to substitute for or interfere with the subject matter of patent – both that which is unpatentable, such as principles, and that which is, such as processes and methods of operation. Indeed, in attempting to lump these terms together as undifferentiated "ideas," Lotus would undo much of patent law, in which the distinction between "processes" (or "methods of operation") and "ideas" (or "principles") is as central as the distinction between "expression" and "ideas" is to copyright. *See, e.g.*, *Diamond v. Diehr*, 450 U.S. 175, 182-185 (1981) (contrasting patentable "processes" with unpatentable "ideas"). "Process" and "method of operation" for these purposes are the *opposite* of "ideas" – a fact of which Congress plainly was aware.⁴⁸

⁴⁷ *See, e.g., Saranac Automatic Mach. Corp. v. Wirebounds Patents Co.*, 282 U.S. 704, 708, 715 (1931); *Graver Tank & Mfg. Co., Inc. v. Linde Air Prods. Co.*, 336 U.S. 271, 278 (1949); *U.S. Indus. Chems., Inc. v. Carbide & Carbon Chems. Corp.*, 315 U.S. 668, 676-77 (1942); *Application of Drummond*, 302 F.2d 761, 764 (C.C.P.A. 1962); *Application of Orsini*, 158 F.2d 286, 287 (C.C.P.A. 1946); *Rafford Process Corp. v. Castanea Paper Co.*, 98 F.2d 355, 358-359 (3d Cir.), *cert. denied*, 305 U.S. 635 (1938).

During the time that the copyright revision legislation was pending, the Court handed down its decision in *Gottschalk v. Benson*, 409 U.S. 63 (1972). In *Gottschalk*, the Court specifically used the term "procedure" in its definition of an algorithm. *See* 409 U.S. at 65 ("A procedure for solving a given type of mathematical problem is known as an 'algorithm'"). At the time Section 102(b) was enacted in 1976, therefore, "procedure" might have been understood as applying, *inter alia*, to unpatentable algorithms. *See also id.* at 67 ("abstract intellectual concepts" are not patentable).

⁴⁸ *See Copyright Law Revision: Hearings Before the Subcomm. on Courts, Civil Liberties, and the Admin. of Justice of the House Comm. on the Judiciary*, 94th Cong., 1st Sess. 2223 (1975) (proposal by Computer & Business Equipment Manufacturers Association to excise "plan, procedure, process, system, method of operation," leaving "idea, concept, principle, or discovery" as uncopyrightable subject matter); *id.* at 334 (proposal by Information Industry Association to amend 102(b) to allow protection for a "collection of ideas or abstractions arbitrarily

Nor do the terms in Section 102(b) denote mere "abstractions," as the district court suggested. *Borland I* at 91, Pet. App. 167a. The line between what is copyrightable and what is not has never been drawn at the point at which words are first attached to abstract thought. *But see id.* "Expression" in the copyright law has regularly been construed to include "abstractions" such as the detailed aspects of the plot of a play,⁴⁹ while at the same time the textual labels on Selden's forms were held not to be protected. Similarly, some of the § 102(b) words from the patent law denote what the district court referred to as an "abstraction" (*e.g.*, "principle"); the disclosure of the "best mode" for a patent claim covering Lotus' method of operation, however, would doubtless cover the words themselves. 35 U.S.C. § 112 (1995).

2. A "Computer Program" is not a "Process" or "Method of Operation."

Lotus seems to argue that, even if the terms of Section 102(b) have a plain meaning under the patent laws, they should not be given that meaning because to do so would be inconsistent with Congress' intent to extend protection to computer programs. Lotus Br. at 29-30. The legislative history, however, shows that Congress saw no such conflict. Indeed, it is evident that the exclusion of "processes" and "methods of operation" in Section 102(b) was meant specifically to *limit* the protection afforded to computer programs. Thus, the House Report states that Section 102(b) was intended, among other things, to make clear that the "processes or methods embodied in the [computer] program are *not* within the scope of copyright law." H.R. REP. 1476 at 57 (emphasis added).

selected from a plurality of alternative ideas or abstractions or in a discretionary pattern of events or processes").

⁴⁹ *See, e.g., Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930), *cert. denied*, 282 U.S. 902 (1931); *Kouf v. Walt Disney Pictures & Television*, 16 F.3d 1042, 1045 (9th Cir. 1994) (comparing similarities of ideas and expressions in two works, with "plot" as an expressive element).

The House Report indicates that Section 102(b) was enacted in part in response to "some concern [that] has been expressed" regarding the protection of program processes and methods. *Id.* This concern was voiced principally during hearings before the Senate Subcommittee in 1967 on a predecessor revision bill, S.597. During these hearings, the report of the Interuniversity Communications Council (more commonly referred to as EDUCOM), particularly cautioned that extending copyright protection to a program's "process" would "amount to giving programs a breadth of protection similar to that accorded by patent, but without the safeguards and limitations that rightly surround the grant of a patent." *Copyright Law Revision: Hearings Before the Subcomm. on Patents, Trademarks, and Copyrights of the Senate Comm. on The Judiciary*, 90th Cong., 1st Sess. 572 (1967). EDUCOM concluded that copyright protection could be applied to computer programs, but only if narrowly cabined, *id.* (emphasis added):⁵⁰

If the process embodied in a computer program ought not to be aggrandized through copyright, it might still seem plausible to allow a narrower copyright – one that would confer upon the copyright proprietor the exclusive right to replicate the *instructions themselves* . . . But it becomes evident that this right must be carefully circumscribed.

⁵⁰ It appears that the EDUCOM report and its ensuing recommendations may have been a source of what ultimately became Section 102(b). During EDUCOM's oral presentation, the chairman of the Senate subcommittee asked EDUCOM to propose language that would solve its concerns. *Id.* at 562, 565. EDUCOM reported back with two proposals, one of which would have amended Section 106 relating to the rights of copyright owners as follows: "Provided, however, that nothing in this title shall be construed to give the owner of copyright the exclusive right to any idea, process, plan, or scheme embodied or described in the copyrighted work . . ." *Id.* at 1059.

S. 597 ultimately was not reported out of subcommittee. The next session, however, a nearly identical bill, S. 543 (91st Cong.), was reported to the Judiciary Committee with the addition of a proposed new Section 102(b). This amendment, which appears to be based in part on the EDUCOM proposal, is identical to the enacted version of Section 102(b) except for the inclusion in the bill of the word "plan." See 1 KAMINSTEIN LEGISLATIVE HISTORY PROJECT 41-42 (1981), citing S. REP. NO. 1219, 91st Cong., 2d Sess. (1970) (Committee Print).

The same distinction was drawn in the *Final Report of the National Commission on New Technological Uses of Copyrighted Works* (1978) ("CONTU Report"), which recommended the changes enacted in the 1980 Software Amendments. The Report assured Congress that the line between programs and processes remained intact. Accordingly, "one is always free to make a machine perform any conceivable process (in the absence of a patent)." *Id.* at 20. The only program elements identified as protected by copyright were the programmer's writings: the source code, the object code into which it was translated, and possibly the programmer's flow charts (perhaps as a pictorial or graphic work). *Id.* at 21 & n.109.

For more than a century, *Baker v. Selden* and its progeny have held that copyright protection should not be allowed to intrude upon and disrupt the careful balance that has been struck under the patent laws concerning when to allow a private monopoly in the "useful arts." Legislating against that background, Congress codified that line of decisions in Section 102(b), and exhibited particular concern that copyright protection for computer programs not be used to undermine the patent regime. In excluding "ideas" from copyright protection under Section 102(b), Congress sought to ensure that authors were not given too broad a monopoly relative to other authors;⁵¹ but in excluding "processes" and "methods" from Section 102(b), Congress also has sought to ensure that authors, by using copyright to avoid the restrictions of the patent law, cannot obtain an unwarranted monopoly relative to *inventors*. As *Bonito Boats* teaches, to allow an inventor to circumvent these restrictions, and obtain a monopoly on an unpatented utilitarian work through the simple expedient of calling itself an "author," is to jeopardize the integrity of the patent system as a whole.

⁵¹ *Feist*, 499 U.S. at 349-50 (the idea/expression distinction is intended to ensure that an author is not overcompensated relative to later authors, by "assur[ing] authors the right to their original expression, but encourag[ing] others to build freely upon the ideas and information conveyed by a work"). See generally William M. Landes and Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. OF LEGAL STUD. 325, 333 (1989) (the copyright law's dichotomy between idea and expression can be understood as an attempt to promote economic efficiency by preventing overcompensation).

II.

LOTUS' MENU COMMAND HIERARCHY IS UNPROTECTED UNDER SECTION 102(b) OF THE COPYRIGHT ACT.

In its report to Congress, CONTU noted that the distinction between the protected elements of a computer program and those excluded as "processes" or "methods of operation" would not always "shimmer with clarity." CONTU Report at 18. Nonetheless, CONTU advised Congress that "[t]o attempt to establish such a line in this report written in 1978 would be futile." *Id.* at 22. CONTU accordingly advised Congress that "[s]hould a line need to be drawn to exclude certain manifestations of programs from copyright, that line should be drawn on a case-by-case basis by the institution designed to make fine distinctions – the federal judiciary." *Id.* at 22-23.

Ironically, Lotus now chastises the Court of Appeals for making precisely such a determination, on the ground that the line already has been drawn by Congress. Lotus Br. at 45-49. In fact, however, the Court of Appeals was acting in accordance not only with what Congress expected, but what the Constitution and this Court have required. This Court repeatedly has stressed that the purpose of the copyright laws is not to "maximiz[e] the number of meritorious suits for copyright infringement," but rather to "enrich[] the general public through access to creative works." *Fogerty*, 114 S. Ct. at 1029. To justify what the Court has referred to in the patent context as the "embarrassment" of a private monopoly, *Bonito Boats*, 489 U.S. at 148, the copyright law must encourage and reward authors, but only insofar as it "serve[s] the cause of promoting broad public availability of literature, music, and the other arts." *Fogerty*, 114 S. Ct. at 1029, quoting *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975). Where the literal terms of the statute are ambiguous, the Copyright Act must be construed in light of this basic purpose.⁵²

⁵² *Twentieth Century Music Corp.*, 422 U.S. at 156; *Sony*, 464 U.S. at 432. Cf. *Graham*, 383 U.S. at 5 ("The Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose").

A. The Lotus Menu Command Hierarchy is Not a "Computer Program" Under Section 101.

Much of Lotus' brief rests on the proposition that the menu command hierarchy is a "computer program" (or a portion of one) within the meaning of Section 101. Section 101 defines a computer program as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." 17 U.S.C. § 101 (1995). Lotus argues that not just the 1-2-3 program's code, but the menu command hierarchy itself, "fits" this definition, in that it could be described as a "set of statements or instructions" that can be used in a computer to accomplish "a certain result." Lotus Br. at 30. Alternatively, Lotus suggests that the command hierarchy is part of the "computer program" because it "is generated by the statements contained in the program's 'source code.'" *Id.* at 7.

Lotus' initial argument – that the menu command hierarchy generated by the 1-2-3 program is itself another "computer program" – is not consistent with the ordinary way in which the term "computer program" is used. Indeed, Lotus does not claim that it is. Users looking at the command words and other symbols arrayed on a computer screen would not describe these figures as a "computer program," but rather as the means for *accessing* a computer program. Similarly, the CONTU Report that recommended the definition of "computer program" adopted in Section 101 never remotely suggested that the definition that it proposed would extend to portions of a screen display. Rather, the CONTU Report uses "computer program" in the way that it is customarily used: to describe source code and object code.⁵³

⁵³ See CONTU Report at 21 n.109 (identifying source code and object code as "programs"); see also CONTU Transcript of Sept. 15, 1977 CONTU meeting at 78 (explaining that phrase "directly or indirectly" is used in the definition of "computer program" because of intent to cover both object code and source code). The CONTU Report is ambiguous as to whether "flow charts," which are used by programmers to diagram the program's sequence of steps before actually writing the code, also might be protected as graphical works. See CONTU Report at 21 & n.109.

It is true that the Lotus menu commands may be described as a program *language*,⁵⁴ but that only serves to highlight the way in which it differs from a computer *program*. Lotus' own brief emphasizes that it is only after a user combines "an entire sequence of keystrokes" that the computer will "actually perform an operation" – in other words, will "bring about a certain result." See Lotus Br. at 8-9. Lotus describes the entry of each such "sequence of keystrokes" as "an instruction." *Id.* A set of such keystroke sequences, in turn, would seem to fit the language of Section 101, which requires "a set of statements or instructions." That is how Lotus' users' manual defines a "macro": it is a "set of instructions" made up of "a sequence of keystrokes and commands." 1-2-3 Ref. at 166.

A "macro" thus may be a "set of statements or instructions," i.e., a "computer program," but the menu command hierarchy is not. Until the user enters the keystrokes in a combination that will cause the computer to perform an operation, there has not been the entry of a "set" of instructions that will cause the computer to "bring about a certain result." Indeed, as Lotus itself insists, until the user enters a keystroke sequence into the computer, there has not been even a single "instruction." Lotus Br. at 8. The menu commands thus may provide the building blocks from which a "computer program" can be built; but the creative effort that transforms these building blocks into a computer program is provided by the user, not by Lotus.⁵⁵

Lotus' alternative argument for coming within the definition of "computer program" under Section 101 is that the menu command hierarchy is a part of the program because it is "generated"

⁵⁴ See, e.g., *Borland II* at 206, Pet.App. 109a (describing the use of keystroke sequences as a "macro language").

⁵⁵ The importance of the requirement of a set or series of instructions is borne out in the ordinary dictionary definition of a computer program. See, e.g., WEBSTER'S, *supra* at 940 ("program" defined as "a sequence of coded instructions that can be inserted into a mechanism (as a computer)"). More specialized dictionaries also are to the same effect. See, e.g., IBM DICTIONARY OF COMPUTING, 131 (10th ed. 1993) (a "computer program" is "[a] sequence of instructions suitable for processing by a computer"); MICROSOFT PRESS COMPUTER DICTIONARY 90 (2d ed. 1994) (a "computer program" is "[a] set of instructions in some computer language, intended to be executed on a computer to perform a useful task").

by the program. Lotus Br. at 7. This is not an argument on which Lotus has rested much weight, and with good reason. As Lotus' own brief attests, the 1-2-3 "statements" to the computer are "contained in the program's 'source code,' " and the menu command hierarchy is "generated" by those statements. *Id.*⁵⁶ In the language of Section 101, the source code is the "set of statements or instructions" that constitutes the "computer program"; the menu command hierarchy (as well as the rest of the screen display) that it generates is the "certain result."⁵⁷

The question of copyright protection for the screen display generated by the 1-2-3 program must be assessed independently from Lotus' copyright in the program itself. Lotus' argument regarding the intended breadth of protection for computer programs, see, e.g., Lotus Br. at 30-31, accordingly is irrelevant. It is as part of the 1-2-3 screen display, or as part of the Lotus users' manual, that the menu command hierarchy must be a protected element; it is not part of the 1-2-3 "computer program" within the meaning of Section 101 and 102(a).

B. The Menu Command Hierarchy is an Unprotected Element of the Lotus Users' Manual and the Lotus Screen Display.

Lotus has contended, somewhat cynically, that "[w]ere these words fixed upon a series of printed pages, instead of appearing on

⁵⁶ See also *Borland II* at 209, Pet.App. 114a ("The menu command hierarchy is part of the 1-2-3 program's output.").

⁵⁷ See also 1 Paul Goldstein, COPYRIGHT § 2.15.3.1, at 2:200, 2:202 (2d ed. 1996) (The suggestion that copyright in the computer program would extend to the screen display would "dramatically depart" from the statutory definition of computer programs. Accordingly, "[c]opyright in a computer program that produces certain screen displays will protect the program but will not prohibit a competitor from independently designing a program that produces the same screen displays."). If the language of the statute were in any way ambiguous, this interpretation would be confirmed by the CONTU Final Report. The report made it clear that copyright protection for the computer program was to be determined entirely apart from the question of copyright protection for the output or "certain results" generated by the program. See CONTU Report at 21. The results generated by the program thus have to qualify separately for copyright protection; their status does not affect the program's copyright.

a computer screen, there could hardly be a question that they would be protected by copyright." Lotus Br. at 17. In fact, however, the words *are* fixed upon a series of printed pages – the pages of the Lotus users' manual (and dozens of other books about 1-2-3 as well). Whether as part of Lotus' users' manual, however, or as part of the Lotus screen display, the Lotus menu command hierarchy is unprotected; it is a system or method of operation under Section 102(b).

1. The Lotus Reference Manual

Just as Selden prepared a book for users of his copyright system, Lotus has prepared a book for users of the 1-2-3 program. In the 1985 version of Lotus' manual, 138 pages are devoted to explaining the functions performed by different menu commands; another 60 explain how to use the commands to build macros. 1-2-3 Ref. at 28-217 (Dkt. 158) [Dkt. 164, JA 78-79]. At the beginning of the chapter committed to menu commands, there is a "functional summary" that lists approximately 150 commands, with a one-line description of the tasks that each command performs. *Id.* at 28-37. The summary illustrates that the Lotus menu commands are not a "structured dialogue" with the user. Rather, the command combinations simply are listed ("/Range Format Text") with a description of the operation they perform ("display formulas instead of values"). *Id.* at 29. The summary is not even organized by hierarchy commands, but by user interest.

Nothing could be clearer from Lotus' users' manual than that the menu commands do not illustrate or explain the method of operation – they *are* the method of operation.⁵⁸ All of the terms used to explain the menu commands are unambiguously functional: the Range commands "manipulate" ranges of cells, *id.* at 62; the File commands "save" worksheets, *id.* at 86, and so forth. Lotus cites the District Court's conclusion that there were "expressive" elements to the commands and their arrangement, Lotus Br. at 41, but it does not explain, much less defend, the District Court's

⁵⁸ Lotus' contention that Borland did not argue below that the command hierarchy is a method of operation, Lotus Br. at 43 n.65, is belied by the record. Borland 1st Cir. Br. at 39, 50; Borland S.J. Br. at 29-113.

rationale in reaching this conclusion. The District Court found the command hierarchy "expressive" because a "satisfactory spreadsheet menu tree can be constructed using different commands and a different command structure." *Borland II* at 217, Pet.App. 103a. The fact that there is more than one way to achieve a particular function, however, is pertinent to the question whether the system can be *patented*, not whether it is the proper subject of copyright. As any overseas traveler can attest, there are many seemingly satisfactory ways of arranging the configuration of electrical sockets; yet that does not render the shape of any particular socket an "expression" protectable under copyright.

The Court's decision in *Baker v. Selden* is instructive on this point. The Court did not find that there were only a limited number of ways to practice double-entry bookkeeping; rather, it held that Baker had a right to practice Selden's way. Similarly, although the Court found that Selden's forms were expressive in the sense that they "illustrated his method," 101 U.S. at 104, that did not suffice to render the forms a protected element of Selden's copyright.

2. The Lotus 1-2-3 Screen Display

As the District Court's opinions below reflect, it is difficult to describe the command hierarchy without referring to its functionality, or even without using the specific terms excluded under Section 102(b). See, e.g., *Borland IV* at 231, Pet.App. 41a (menu tree may be viewed as the "selection and arrangement of the executable operations in Lotus 1-2-3"); *Paperback* at 65, Pet.App. 229a ("the exact hierarchy – or structure, sequence and organization – of the menu system") (emphasis added). Lotus labors under the same difficulty. Thus, its users' manual describes 1-2-3's commands as "organized into a multi-level menu system." JA 528 (Raburn Decl.) and JA 533-34 (Ex. A) [Dkt. 164, JA 78-79].

Similarly, in Lotus' European patent application for a user interface, it describes a "control hierarchy" as "divid[ing] controls, assign[ing] each control a label, display[ing] the labels according to a design hierarchy, and operat[ing] on the controls according to a functional hierarchy." JA 838. In the language of patent law, the recited claim is for "a method of providing a plurality of controls." JA 841 (emphasis added). The "method" is comprised of four

steps, the last of which is “operating on said controls according to said functional hierarchical groups.” *Id.* (emphasis added). A command hierarchy is, in short, “a method of operati[on].”

The ease with which the menu command hierarchy fits patent terms such as “system” and “method of operation” is not coincidental. Indeed, this case poses squarely the question whether copyright extends to the subject matter of utility patents, because the Patent Office has issued patents on menu command hierarchies like Lotus’. Thus, for example, IBM, Lotus’ parent, obtained a patent in 1983 for a “display menu” on a word processing program. JA 856. Similarly, a spreadsheet software maker was able to obtain protection for a system employing a command hierarchy similar to Lotus’. JA 842. S.J. Ex. 15, 16, 23 [Dkt. 164, JA 78-79].

In arguing for overlapping protection, Lotus has identified no ready means by which its proposed interference with patent could be cabined. Indeed, Lotus’ effort to distinguish the menu command hierarchy from the Court of Appeals’ analogy to the VCR provides a glimpse of just how vast is the subject matter potentially affected by Lotus’ rule. Lotus asserts that the most “fundamental” difference between its array of menu commands and the “user interface” of a VCR is that a VCR interface consists of roughly six buttons, whereas the number of commands using the 1-2-3 hierarchy exceeds four hundred. Lotus Br. at 17 n.27. To begin with, Lotus’ distinction is an artificial one. Many users do not operate a VCR just by pushing the VCR’s buttons; they also use a remote control that operates through the selection of program-generated menus on the television screen (e.g., to delay-record a television program). Sony VCR Operating Instructions, Ex. 5 to Borland S.J. Br. (Dkt. 142) [Dkt. 164, JA 78-79]. Nothing that Lotus has proposed would distinguish its menu command hierarchy from these VCR controls.

More fundamentally, Lotus provides no meaningful conceptual basis why the arrangement of six buttons is not copyrightable, but four hundred buttons is. By Lotus’ analysis, the arrangement of buttons on the control panel of a commercial jet certainly would be the subject of copyright. What about the sixty to eighty buttons on a typical computer keyboard? The twenty to thirty buttons on the typical business telephone? Menu command hierarchies generated by software are everywhere: on gasoline pumps, automatic teller machines, photocopy machines. Lotus proposes that manufacturers

should be able to obtain a monopoly under copyright on the arrangement of these controls, and force users to learn a new pattern of controls with every different product that they use. From the point of view of “the public good,” *Fogerty*, 114 S. Ct. at 1029, the Court of Appeals aptly summarized such a result with one word: absurd. *Lotus v. Borland* at 818, Pet.App. 20a.⁵⁹ It is no wonder that Lotus’ sole amici are four hardware manufacturers who were early entrants (often with dominant market share) in their markets. *See Brief Amicus Curiae of Software Forum In Support of Respondent* at 13-15.

Lotus attempts to analyze away the command hierarchy’s essential functionality by describing it as a freestanding “literary work” unconnected to the user interface of which it is a part. *See* Lotus Br. at 22 (the command hierarchy is a “literary work” under Section 102(a)). *Compare id.* at 7 (the command hierarchy “is part of what is typically called the ‘user interface’ ”). Lotus provides no justification for treating one portion of the Lotus screen display as a discrete “work of authorship,” any more than the Court treated the headings and arrangement of words on Selden’s forms as a separate work of authorship. In fact, Lotus’ approach is highly distorting. By simply ignoring both the remainder of the screen display (such as the long prompts and on-line help texts), Lotus assumes away the awkward fact that the hierarchy is treated as the matter to be explained, and not the explanation; and by stripping

⁵⁹ Indeed, Lotus’ proposal would directly undermine Congress’ intent in establishing examination requirements before a patent can be issued. Prior to the 1836 amendment to the patent laws, the granting of patents – like copyrights today – was a purely ministerial function. With rapid industrialization, however, Congress found that the system had become unworkable. *See* S. REP. No. 338, 24th Cong., 1st Sess. at 3 (1836) (“The country becomes flooded with patent monopolies, embarrassing to bona fide patentees . . . and not less embarrassing to the community generally, in the use of even the most common machinery and long-known improvements in the arts and common manufactures of the country. . . . Out of this interference and collision of patents and privileges, a great number of lawsuits arise, which are daily increasing in an alarming degree, onerous to the courts, ruinous to the parties, and injurious to society.”). The “interference and collision of privileges” likely to result from Lotus’ claim would pose the same threat to efficient economic growth that Congress sought to prevent with the reforms to the patent system in 1836.

away the menu's words from the "virtual buttons" to which they are attached, Lotus pretends that the case is not as much about machines as any other case about "VCR buttons, automobile gearshifts, or any other type of machine part." Lotus Br. at 17. No amount of wishing, however, will make the command hierarchy into something that it is not. The menu command hierarchy is unprotected as a "system" or "method of operation" under Section 102(b), whether as part of the Lotus users' manual or the Lotus screen display; and it does not become transformed into something else by considering it a separate literary work under Section 102(a).

C. Even if Part of the Computer Program for Purposes of Section 102(a), the Menu Command Hierarchy is an Unprotected Method of Operation under Section 102(b).

The command hierarchy would be excluded matter under Section 102(b) even if the work of authorship under Section 102(a) were the Lotus "computer program" itself.⁶⁰ Lotus does not seriously dispute that the menu command hierarchy can be described as the "method of operating" the 1-2-3 program. Indeed, it is difficult to imagine what the method of operating 1-2-3 would be if it is *not* through use of the command hierarchy. In the video that Lotus prepared in connection with the summary judgment phase of proceedings in the District Court, its spokesman referred repeatedly to "using the menus" to "perform operations." See Dkt. No. 127 [Dkt. 164, JA 78-79] (Borland Response Video containing

⁶⁰ Lotus has argued that computer programs "enjoy copyright protection under the same principles governing other forms of original expression in literary works." Lotus Br. at 31. Compare Kenneth A. Liebman, et al., *Back to Basics: A Critique of the Emerging Judicial Analysis of the Outer Limits of Computer Program "Expression,"* 2 COMPUTER LAW., Dec. 1985, at 1, 8 (quoting Prof. Miller) ("The end purpose of a computer program is to achieve a utilitarian result, i.e., the computer's performance of logical operations in a way that produces the desired practical consequence. One cannot compare, therefore, the underlying processes of a computer program with, say, the underlying plot structure of a novel or a screenplay of a movie. This, of course, is the distinction recognized by the Supreme Court long ago in the seminal decision of *Baker v. Selden*.").

excerpts from Lotus video, copies of which are on file in the clerk's office).

Lotus nevertheless argues that if "method of operation" is used in this patent-law sense, then by analogy the computer program would also be the "method of operation" of the computer, a result inconsistent with Congress' intent to protect computer programs. Lotus Br. at 43. In fact, however, at the time of the enactment of the Copyright Act in 1976, it appeared that source code and object code might fall in the gap between patent and copyright, and not be protected by *either* regime. In closing this gap, the copyright laws appeared well-suited to the task. On the one hand, as the CONTU Report makes amply clear, the industry's concern was with software piracy – the literal copying of a disk and sale of the copy for a cheaper price. See, e.g., CONTU Report at 10-11, 22-23. Copyright was well-suited to protect against such literal copying: the model developed to prohibit the unauthorized duplication of books and sound recordings could readily be applied to the unauthorized duplication of floppy disks. See *id.* at 10-11. On the other hand, such protection did not appear to pose an unduly chilling effect on later programmers, because there were virtually an "infinite" number of ways of writing programs to achieve the same result, "comparable to the theoretically infinite number of ways of writing Hamlet." *Id.* at 20 n.106.

Lotus now proposes to turn this legislation on its head, and obtain a copyright on the one thing that Congress was expressly assured would remain free. The CONTU Report advised Congress that, under the proposed legislation, one was "always free to make the machine do the same thing as it would if it had the copyrighted work placed in it," so long as this result was obtained "by one's own creative effort rather than by piracy." *Id.* at 21. Indeed, the Report went so far as to advise Congress that, if its use was "necessary to achieve a certain result," a later programmer could even *literally* copy the program's code. *Id.* at 20. Accordingly, so long as the later programmer used its own code, "one is always free to make [the computer] perform any conceivable process (in the absence of a patent)." *Id.*

It is precisely such "certain results" that Lotus now seeks to block by copyright. As has already been pointed out, Lotus does not contend that Borland copied Lotus' source code or object code,

or the internal structure of the two programs, at *any* level of abstraction. Indeed, Lotus did not even put its own code into evidence, a striking testament, one can presume, to the complete dissimilarity of the two programs. Instead, Borland looked at something *external* to the program – its “certain results” – and developed its own program to achieve those results.

Lotus’ proposed monopoly on features external to the program has dramatically different economic consequences than the protection on code contemplated by Congress. One of the unique features of computer programs is that they may be built “on top” of one another, a feature that has been central to the use of computer programs to turn one machine (a computer) into an almost unlimited number of other “virtual” machines (a typewriter; telephone; calculator; and so forth). For programs to work in this way, it is necessary that the programs be able to “plug into” one another, using what are called a program’s “interface specification.”⁶¹

Allowing a monopoly on a computer program’s “interface specification,” such as the Lotus menu command hierarchy, would give the copyright holder a windfall, not only because it profits from users’ investment in learning the particular command hierarchy (and resulting reluctance to switch), but because users have invested in developing macro programs “on top of” Lotus’ own program. As Judge Boudin succinctly summarized, “it is hard to see why customers who have learned the Lotus menu and devised macros for it should remain captives of Lotus because of an investment in learning made by the users and not by Lotus.” *Lotus v. Borland* at 821, Pet.App. 26a-27a.

A rule allowing a copyright monopoly on the program’s “socket” threatens to give the owner enormous market leverage not

just in its market – as here, where Lotus can block Borland from creating a product that connects to users’ programs – but in other markets as well. An external interface is not unique or even unusual among computer programs, but rather is common at every level, as “applications” programs (such as spreadsheets) connect to “operating systems” programs (such as Windows), and so forth. Indeed, the entire stand-alone software industry ultimately depends upon the ability of such programs to be “compatible” with – *i.e.*, match the external structure of – the programs that run the computer hardware itself. It is for that reason that all participants in the software industry – users, developers, industry groups, computer scientists – are agreed that Lotus’ position, if adopted, would have potentially calamitous consequences for the software industry in the United States.

Such results are a far cry from the limited protection of source and object code enacted by Congress. Menu command hierarchies and computer programs are not the same. As a matter of economics, copyright protection for source and object code blocks only one of a virtually unlimited number of ways of achieving the same “certain results”; copyright protection for these “certain results,” such as a menu command hierarchy, potentially creates vast market power likely to chill further innovation. As a matter of Congressional intent, Congress plainly sought to provide copyright protection for source and object code; and, equally plainly, it sought to leave their “processes” and “methods” – including such “methods of operation” as a menu command hierarchy – free for all to use in the absence of a patent.

Congress’ intent to exclude matter such as Lotus’ menu command hierarchy seems plain. Even if it were ambiguous, however, this Court repeatedly has exhorted, as noted earlier, that the copyright laws must be interpreted in light of their basic purpose, which is to serve the public good. *Twentieth Century Music*, 422 U.S. at 156; *Sony*, 464 U.S. at 432. As the Constitution itself has made clear, intellectual property rights are not free, but are imposed at the expense of the public itself; what may be withdrawn from the public domain for the enjoyment of private monopoly, therefore, has been carefully limited and circumscribed, both under patent and copyright.

⁶¹ See U.S. Congress, Office of Technology Assessment, *Finding a Balance: Computer Software, Intellectual Property, and the Challenge of Technological Change*, OTA-TCT-527 (Washington, D.C.: Government Printing Office, May 1992) at 126: “Programs have an external design or interface – the conventions for communication between the program and the user or other programs. The external design is conceptually separate from the program code that implements the interface (the internal design). It specifies the interactions between the program and the user or other programs, but not how the program does the required computations. There are typically many different ways of writing a program to implement the same interface.”

APPENDIX

50

If Congress had not spoken, the Court has expressed its reluctance to extend the scope of such monopolies. Here, however, Congress has spoken, at every turn: it has made clear that the copyright laws are not to be used to undermine the integrity of the patent system; and it has equally explicitly made clear that copyright protection for computer programs is to be interpreted narrowly, and consistent with that intent. Lotus' menu command hierarchy is not a "computer program" for purposes of Section 102(a); even if it were an element of a program under Section 102(a), however, it would fall within the scope of matter excluded under Section 102(b). The Court of Appeals' decision is squarely in accord with this Congressional intent, and leaves copyright law in harmony with its Constitutional mandate of promoting the public good - a harmony badly set out of key by Lotus' proposed monopoly. It is accordingly respectfully submitted that the decision should be affirmed.

Respectfully submitted,

GARY L. REBACK
(Counsel of Record)
MICHAEL BARCLAY
SUSAN A. CREIGHTON
COLLEEN BAL
LISA A. DAVIS
WILSON, SONSINI, GOODRICH
& ROSATI
Professional Corporation
650 Page Mill Road
Palo Alto, California 94304
Telephone: (415) 493-9300

ROBERT H. KOHN
BORLAND INTERNATIONAL, INC.
100 Borland Way
Scotts Valley, California
95066
Telephone: (408) 431-1801

PETER E. GELHAAR
KATHERINE L. PARKS
DONNELLY, CONROY &
GELHAAR
One Post Office Square
33rd Floor
Boston, Massachusetts 02109
Telephone: (617) 542-7400

Attorneys for Respondent

December 1995

BEST AVAILABLE COPY

A-1

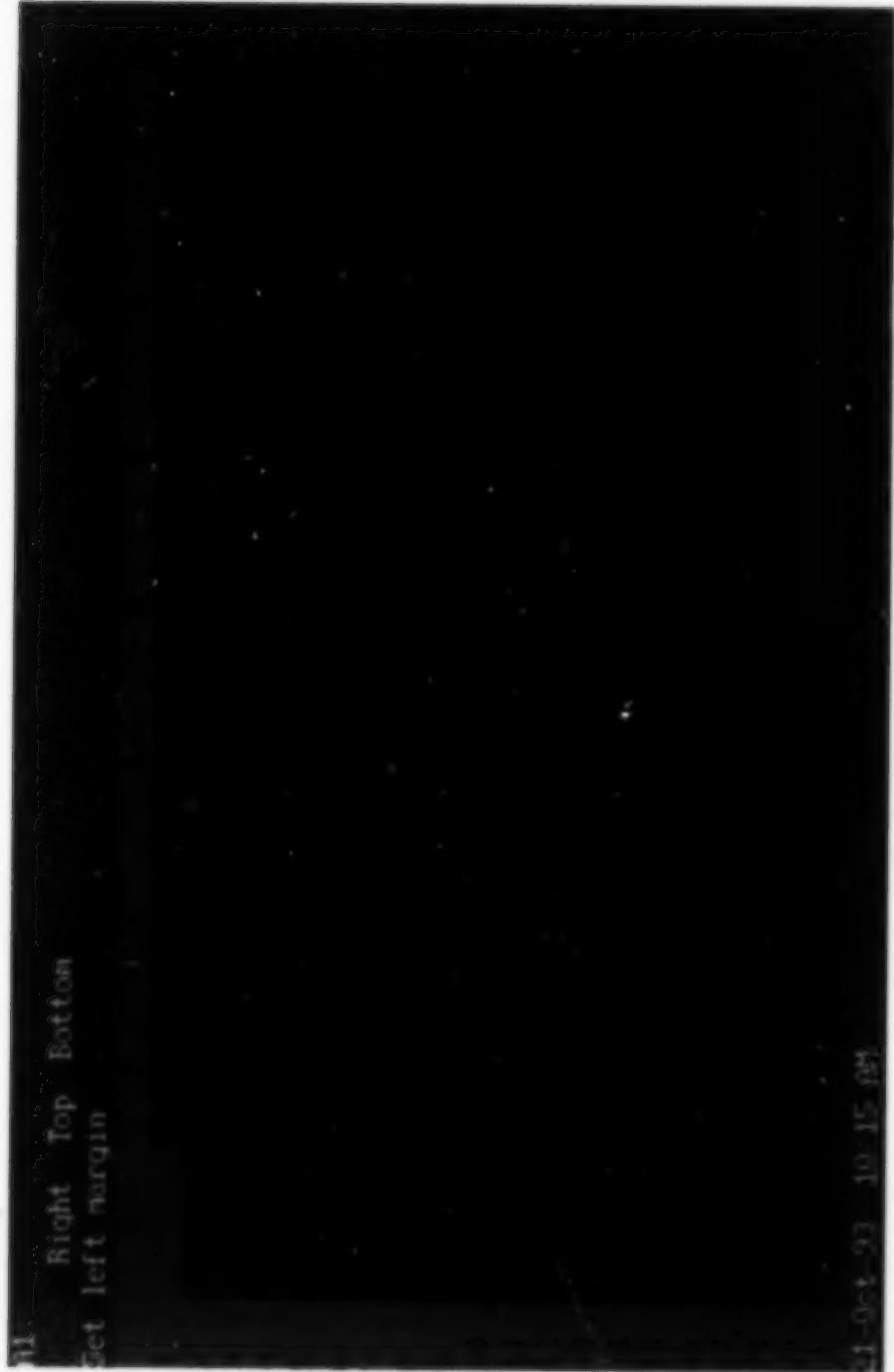


Figure 1: Lotus 1-2-3 Screen Display When Setting the Left Margin for Printing

A-2



Figure 2: Borland's Quattro Pro Screen Display in "123-Compatible Mode" When Setting the Left Margin for Printing

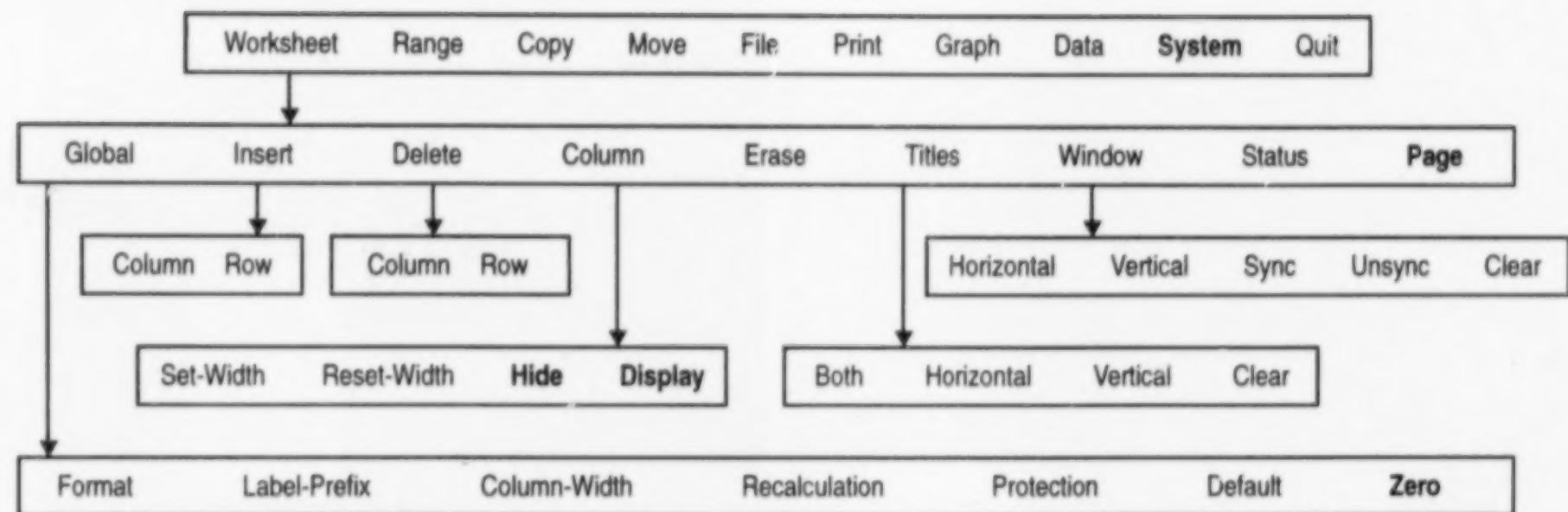


Figure 3: Lotus Command Tree

BEST AVAILABLE COPY

This page intentionally left blank.

A-4



Figure 4: Lotus 1-2-3 Screen Display, Showing Available Command Choices and Long Prompt Message

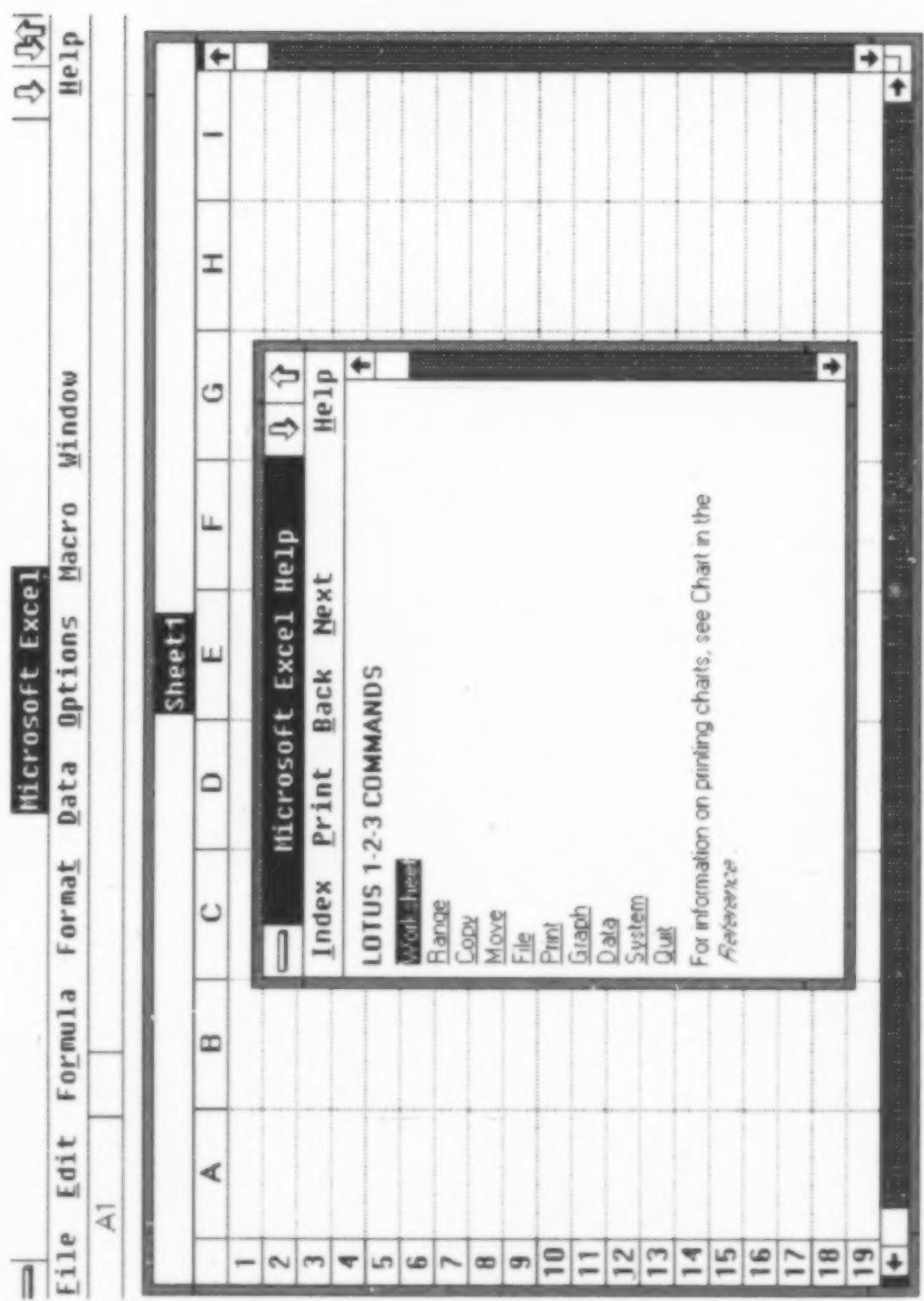


Figure 5: Microsoft's Excel Screen Display, with Lotus Menus, cited by Judge Keeton as Non-Infringing in the Paperback case